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Civil Engineers

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SOCIETY AFFAIRS

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AMERICAN SOCIETY OF CIVIL ENGINEERS

PROCEEDINGS

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SOCIETY AFFAIRS

Annual Meeting

Many engineers are looking forward to the pleasure of attending the 1928 Annual Meeting. The official program already sent to all members of the Society indicates the usual attractive features of these yearly gatherings.

The customary business meetings, reports, technical division meetings, luncheon, and smoker are on the program. Of especial interest will be the award for the first time of the Hering Medal. For sentimental reasons this ceremony should have special significance. Likewise, the bestowal of Honorary Membership, always an impressive event, will add to the appeal of the business session.

The customary social events will provide the necessary interlude between the technical sessions. A special program for the ladies is designed to keep their interest at a continuous high pitch during the meetings.

Those who customarily enjoy the annual sessions need no further urging to insure their presence. Others may benefit by this opportunity to hear the latest developments of Society work and to meet those who are most vitally interested in promoting best professional practice. The official program gives the necessary details and warrants the expectation that the coming meeting will equal in value those that have been the rule in former years.

Certificate Plan at the Annual Meeting

For two years now the Society has been able to put into effect the Certificate Plan of Reduced Railroad Fares, in connection with its Annual Meeting. The effort will be continued for the 1928 Annual Meeting, and should enlist the support of every person attending, both members and their families and friends.

The mechanism of the plan is simple enough. Each person attending the meeting, upon buying his railroad ticket (costing 67 cents or more), requests of the agent a certificate. Note that this is not a receipt, but instead, a signed blank which is to be deposited immediately upon arrival at the meeting. With the submission of 250 such certificates as a minimum, the railroad companies undertake to issue return tickets for one-half the regular fare.

Co-Operation Spells Success

The margins of success during the last two years for this plan have been narrow, it is true, and for this condition there are doubtless plausible reasons. For example, some members and their families travel on passes. Others expect to include a wider circuit in their trip than just to New York and return.

On the other hand, there is not the least doubt that the success of the plan depends very simply on a knowledge of its value and the willingness of every one to help other visitors. This latter applies especially to those who may have little or nothing to gain personally in its success, but whose co-operation is essential to the considerable financial saving of the others.

The procedure is a simple and inexpensive one, even to a person who does not expect to buy a reduced return ticket. No matter where the person is from, when or

how he expects to return, and even whether or not he will return at all, he should secure and deposit a certificate to help the other fellow.

Appreciable Savings

In the aggregate, the saving by this plan is well worth while. A brief estimate for the year 1926 set the saving at $2 000. A person coming even from as far as Detroit or Chicago would make an appreciable gain, especially if he wanted to bring more than one member of his family. In fact, it might prove to be the convincing argument leading him to decide that he could afford the trip. In any event, the saving even from a single ticket would pay for hotel rooms at the meeting for one or more days, or would look like a real dividend from several baby bonds.

A knowledge of the plan and of its economy—perhaps to somebody else if not to himself—should impel each member to co-operate with the Society in bringing about these desirable results.

ENGINEERING RESEARCH AND THE ENGINEERING FOUNDATION*

Specific Instances

Shortly after Ambrose Swasey suggested the creation of the Engineering Foundation in 1914, the World War broke upon the scene. Consequently, all eyes were soon turned to national security problems. In 1916 the newly organized Engineering Foundation and the four Founder Societies joined with the National Academy of Sciences in establishing the National Research Council. From then until 1923 the Engineering Foundation devoted the greater part of its resources to the support of the Research Council and the Council's Division of Engineering. Since 1923, however, it has turned to the original intention for which it was created, of co-operating with the Founder Societies in projects affecting engineering at large, although it still retains a connection with the Research Council.

Some of these projects of the National Societies in which the Foundation has co-operated include: (1) Research on concrete and reinforced concrete arches; (2) research on steel columns for bridges and buildings; (3) research on mining methods; (4) research on properties of steam; (5) research on bearing metals; (6) research on lubrication; and (7) research on strength of gear teeth.

These are all obviously important and much-needed researches. The projects in which the Foundation co-operated with the National Research Council are equally important. Some of these were: (*a*) Research on the construction and maintenance of highways (Advisory Board on Highway Research); (*b*) research on welding (American Bureau of Welding); (*c*) research on injury to marine piling by the teredo and other small boring animals; (*d*) reseach on moulding sands for foundries (Committee on Moulding Sands); (*e*) research on pulverizing of ores, cements, and fuels (Pulverizing Committee); and (*f*) Personnel research (Personnel Research Federation).

Mere enumeration and tabulation of work undertaken can of course lend but a vague idea of actual accomplishments. The reports of the Foundation give information of its widespread activities.

Typical of one of the extensive projects made possible by the Foundation was that called the Fatigue of Metals Investigation, in which it co-operated with the National Research Council, the University of Illinois, and several industrial corporations. Most of the experiments were carried on at the University of Illinois. For conducting this basic research the Foundation contributed $30 000 in cash, besides services. Contributions from other donors of cash, materials, and services brought the total up to more than $130 000. These comparative figures illustrate strikingly how willing other agencies are to help when an impartial institution like Engineering Foundation indorses a project.

This particular research was suggested by the failure of airplane engine parts during the war. Valuable additions to the knowledge of what actually happens in the deterioration of wrought steels, cast steel, cast iron, brasses, bronzes, and other metals were made as a consequence of these extensive experiments covering several years. Some of the old theories about "crystallization of metal" were questioned and disproved. A summarized report called "Manual of Endurance of Metals Under Repeated Stress" gives the practical results; copies or other information may be obtained from the Director of Engineering Foundation, 29 West 39th Street, New York. The fundamental advantage of such a research for practically all branches of engineering is evident.

* This item is the third of a series for the information of the membership of the work of Engineering Foundation. The first two items were published in November and December, 1927, *Proceedings*, respectively.

Metals enter into nearly all engineering undertakings; a knowledge of why they occasionally and disastrously fail is of great importance to all engineers.

As its funds grow, and opportunity permits, Engineering Foundation hopes to assist many other equally significant researches for the benefit of the profession and of the public at large.

WAR MEMORIAL TO AMERICAN ENGINEERS

A Progress Report

Having confidence in the generous sentiment of American engineers for their fellows who died in the World War, 1914-18, the Joint Committee of Engineering Societies is proceeding with the production of the carillon and the clock which are to be their memorial in the tower of the Louvain Library. The foundry is at work on the big bells. Special arrangements for their placement in the tower have been made with the architect, Mr. Whitney Warren, of New York.

Other steps also are being taken to assure the dedication of the Library and the Engineers' Memorial on next Independence Day. The Committee is determined that after July 4, 1928, it can no longer be said that there is no memorial to the engineers of the United States in the region for the defense of which many of them gave their lives.

This Engineers' Memorial will not be a mute mass of metal and stone, appropriate as such work of a sculpture might be. It will be vocal, the soul of a beautiful storehouse of knowledge, the gift of citizens of the United States, standing on the highest land in the ancient city and facing its greatest public square.

With the co-operation of ten societies the Joint Committee has mailed to more than 60 000 engineers invitations to participate in this unique and beautiful memorial to their heroic dead. Sixteen societies, engineering periodicals, and the lay press have published information about the memorial in all parts of the country. Engineers of the United States by quickly and generously oversubscribing the fund needed will ensure an endowment for the perpetual care of the clock and the carillon, also for the purchase each year of American engineering books for the Engineering Section of the Louvain Library, thus strengthening further the bond between the engineers of Europe and America.

Contributions are coming in encouragingly. They are to be sent to the Committee on War Memorial, Room 1617, 29 West 39th Street, New York, payable to United Engineering Society. There will be a star for every State of the Union on the Louvain Library Tower, in the four faces of its clock. Engineers of every State should share in the memorial.

The Holland Tunnel—A Great Engineering Monument

The finishing touches on a great engineering achievement, the Holland Tunnel, were completed in November, 1927, and the official opening of this great work took place with fitting ceremonies on November 12.

Perhaps nothing within recent years has so focused attention on the contribution of engineers to public welfare. In the first place, the project has been under way for a long time, about eight years or more. This, in itself, lends a special importance to the magnitude of the work.

Then there was the vital need for this improvement, with the ever present expectation of a great traffic relief upon its completion. The tragic death of two chief engineers in quick succession gave a personal touch to the great enterprise in the public mind. And, finally, the naming of this masterpiece of engineering after its first Chief Engineer, the late Clifford M. Holland, M. Am. Soc. C. E., struck a popular chord in the sympathy of every good citizen.

Engineers in Limelight

All in all this work has afforded great pride to all engineers. In fact, the engineering accomplishment and point of view was much in the foreground at all times. Even to the final ceremonies, the engineer was accorded a prominent place; Ole Singstad, M. Am. Soc. C. E., the Chief Engineer, was properly given a part in the opening ceremonies.

Such wholesome advertising of the profession is bound to create a favorable public impression, especially because it presents in its most reasonable light, accomplishments that are indeed worthy. In honoring a man who is gone by the bestowal of his name, the credit assumes a more or less impersonal tone, but is on the other hand, so to speak, personified and the whole profession becomes the gainer.

This is doubly true in the present instance, for not only is Mr. Holland commemorated in the naming of the tunnel

itself, but the second Chief Engineer, the late Milton H. Freeman, M. Am. Soc. C. E., is accorded a fitting tribute in having the Square on the Manhattan end named for him. The personal note that was thus made so large a part of this work was carried through to the very end, when the families of the two former Chiefs were given prominent places in the ceremonies attending the opening of the tunnel.

Success in Operation

For days before and after the event, newspapers of national prominence, especially in the Greater New York District, gave wide publicity to this work. The ceremonies themselves were attended by tens of thousands, including those who took occasion to traverse the tunnel before traffic was permitted officially. Even after the official opening, the matter received wide notice in the newspapers, because of the successful operation. The fact that the tunnels carried their estimated traffic so easily, and that the financial return from their operation was so large, caused much favorable public comment—still another feather in the engineer's cap.

It is thus a pleasure to record a series of events redounding to the honor of the profession, and especially as some of its most distinguished participants were members of the Society.

Files of the various interesting newspaper clippings have been made up by the Society and presented both to Mrs. Holland and Mrs. Freeman. A third copy may be found in the Reading Room, where all members may view and enjoy it. It makes an imposing display.

Emergency Dams Discussed at December Society Meeting

Although the "Emergency Dam on the Inner Navigation Canal at New Orleans, Louisiana", was the special topic for the Society Meeting on December 7, the discussion ranged far and wide, covering many of the several types for such structures and various examples throughout the world.

The author of this paper, Henry Goldmark, M. Am. Soc. C. E., introduced his subject by general remarks relating to usual conditions, types, and operation of emergency dams, dwelling especially on the single notable case of the operation of such a device under critical conditions on the Canadian Lock of the "Soo" Canal in 1909. His explanation of the New Orleans structure was complete, yet not too technical for the full appreciation of the meeting.

The ensuing discussion opened up many questions relating to water-tightness, friction of the stop-log girders in their slots, flotation of the various girder sections, and other essential details. Geographically, a wide territory was reported by the various members in discussion. Rear Admiral Frederic R. Harris drew from his experience in the Bureau of Yards and Docks, U. S. Navy; Col. W. J. Barden mentioned conditions on the Lake Washington Ship Canal, in Seattle; Col. Roger D. Black referred especially to the emergency dam on the lock at Troy, N. Y.; while Mr. Goldmark quoted from observations at Panama, the "Soo", and elsewhere.

Those in attendance exhibited a keen interest in the paper and its discussion, which was continuous and vigorous. The attendance was about 80. W. T. Chevalier, M. Am. Soc. C. E., presided.

Life Members

It is no mean honor to have attained the position of exemption from Society dues by virtue of long and continuous connection with the Society. Each year the list of names as it appears in the Year Book is lengthened by new recruits —perhaps it should be said by old recruits. It makes an imposing list. It contains the names of those who have borne the burden through the "heat of the day", and have attained this honor by continuous devotion to the profession and by conspicuous service in it.

Such is the list of those who are now added to this roster. Mere enumeration marks these new life members as ornaments to the Society and representative of many of the best things in it. The eligibles as of January 1, 1928, consist of the following:

John W. Alvord
George B. Bassett
Charles R. Bettes
William L. Breckinridge
Robert K. Brown
Richard Sutton Buck
Arthur P. Davis
Walter E. Dauchy
Valentine S. Doebler
Albert B. Drake
Henning Fernstrom
Charles Evan Fowler
William Gray
William McLaurine Hall
John V. Hanna

Harry M. Herbert
Richard H. Hood
Abraham L. Hyde
Serge de Kareischa
Francis D. H. Lawlor
Walter McCulloh
Archibald McLean
Anson Marston
Elwood Mead
Charles A. Mixer
Frank Moberly
Charles H. Moore
Alfred M. Mosscrop
Thomas Pettigrew
Corydon T. Purdy
Henry E. Riggs
Louis C. Sabin
Frederick E. Schall
Morris R. Sherrerd
Charles H. Snow
Thomas U. Taylor
Reginald H. Thomson
Vsevolod E. Timonoff
Lee Treadwell
Alfred W. Trotter
Gerdt H. Vedeler
Charles V. Weston
Frank Wilcox
Pope Yeatman

A GREAT STOREHOUSE OF ENGINEERING INFORMATION*

Extra-Mural Service

In the extra-mural service being built up by the Engineering Societies Library as its finances permit, an occasional large total charge is incurred for exceptionally protracted services. A Western steel company, for example, was charged the unusual fee of $500. This company wanted complete information on transverse tests of steel, and asked the Library to compile copies of all accessible records. Weeks of searching and photo-printing produced three volumes of data. Two years afterward the company's chief engineer told the Director of the Library that the cost seemed high when the bill was paid, but that the volumes had been in constant use. The information had been worth thousands of dollars.

A client who wishes to pay no more than a moderate fee for services can state to what limit he is willing to go. Thus, he may specify that he would like searches made on a particular subject, but that he does not wish to exceed $5 or $30 for the information. The Library is as willing to perform a small service as a large one.

The desired information can usually be supplied by the Library more cheaply than in any other way. Some large industrial corporations maintain their own libraries at an expense of several thousand dollars per year; but when it is considered that the Engineering Societies Library furnishes information selected from 1 200 periodicals printed in fifteen languages, received from thirty-seven countries, and has available 125 000 volumes, all classified and indexed, the advantages of a central storehouse are evident.

The requests that come in daily are of all sorts and descriptions in the field of technology. A company in the Middle West writes for a bibliography of recent articles on dust precipitation in asphalt-mixing plants. A New England electrical engineer wants references on the measurement of discharge by hydro-electric units. A Southern manufacturer asks about the burning of peat in pulverized form. The superintendent of a rolling-mill near Pittsburgh, Pa., has heard of an article on the failure of metals by creep published in a Scottish shipbuilders' magazine and he wants photo-prints of the article.

A frequent occurrence is the following: A company pursues a particular line of research in a special effort to solve a difficult problem. After months of effort and thousands of dollars spent in experiment, the problem is solved as well as possible. Then some one discovers that the same work had been done and published before, and that the Engineering Societies Library could have supplied the identical information for a few dollars. A company about to spend any large sum of money on a particular piece of research should make sure that there is no record in any language of the same work having been done before. Such requests for searches by the Library Staff are increasing yearly as American industries learn to utilize the advantages of the great storehouse of technical information available for them at the Engineering Societies Library, 39th Street, New York.

Graduate Study of Transportation at Yale

"Five Strathcona Memorial Fellowships in Transportation, of One Thousand Dollars each, are offered annually for advanced work in Transportation, with special reference to the construction, equipment, and operation of railroads,

* This item is the third of a series for the information of the membership of the work of the Engineering Societies Library. The first two items were published in November and December, 1927, *Proceedings*, respectively.

and other engineering problems connected with the efficient transportation of passengers and freight, as well as the financial and legislative questions involved."

Thus, the announcement of graduate work at Yale University opens up to young engineers the possibility of valuable study on an important engineering problem. It is natural to expect that engineers would fit into the requirements of these Fellowships, and that some young members of the Society, especially graduates or graduating students, may well become the lucky holders of one of these Fellowships.

Information and application blanks may be obtained from the Dean of the Graduate School of Yale University. These must be submitted before March 1, including personal college records, testimonials, and a photograph.

In thus again giving publicity to this valuable opportunity, the Society may well look forward to results of interest and value to some of its younger members.

Study of Irrigation Hydraulics

One of the Special Committees of the Society that has been most active and has produced excellent technical results, is that on Irrigation Hydraulics. At its recent meeting at Portland, Ore., on November 21 and 22, eight members of the Committee were present.

The work has been divided into several sub-headings, each of which is considered at Committee meetings. Current progress is detailed by the various Committee members, and a program for future research is outlined.

For example, at the Portland meeting, the following important phases of irrigation hydraulics were discussed at length: Lateral Flow Spillways; Measuring Irrigation Deliveries; Scouring Below Dams; Silting; Losses in Siphon Spillways; Water Movement and Pressure under Dams; Canal Conversions; Evaporation from Soils; and Evaporation Losses in Reservoirs.

One of the most important results of this Committee's work has been the securing and submission of many valuable papers touching these various problems. The *Proceedings* for the last year or two have gained immeasurably in real worth to irrigation engineers through presentation of many of these papers. Great credit is due to the Committee and its painstaking work, and for the excellent results obtained. Unless present prospects utterly fail, several further papers on these timely questions will be submitted by the Committee.

Local Sections*

Arizona.—November 5, 1927. At the Annual Meeting held in Phoenix the following officers were elected: President, Howard S. Reed; Second Vice-President, Frank C. Kelton. The morning session was devoted to a paper by Professor G. E. P. Smith on "Orange Growing in Spain" and an address and subsequent discussion on zoning by Mr. William G. Hartranft, President of the City Planning Commission. Mr. J. W. Blackman, the retiring President, also gave a brief report of the work of the Section during the year. The chief speakers of the afternoon were F. A. Noetzli, M. Am. Soc. C. E., one of the builders of the Stevenson Creek Dam, who gave an illustrated lecture on its construction, and Major C. R. Olberg, Assistant Chief Engineer for the United States Indian Reclamation Service, who presented an illustrated address on "The Construction of the Coolidge Dam on the Gila River at San Carlos". The meeting closed with a dinner dance at the Arizona Club. Attendance 50.

Baltimore.—November 17, 1927. Professor John H. Gregory, of Johns Hopkins University, presented a paper on "The O'Shaughnessy Dam and Reservoir". The address was illustrated with lantern slides, and was followed by a general discussion. Attendance 42.

Central Ohio.—November 18, 1927. At the Annual Meeting held in Columbus, the following officers were elected: President, Frederick H. Waring; First Vice-President, Lasley Lee; Second Vice-President, Orris Bonney; and Secretary, Raymond H. Smith. The remainder of the meeting was devoted to reports of committees, and the routine business of the Section. Attendance 10.

Cleveland.—September 14, 1927. A luncheon meeting was held at which a report was presented by Mr. John H. Tufel, Delegate from the Section to the Denver Convention in July.

October 11, 1927. This was a luncheon meeting, at which it was stated that 11 members of the Section expected to attend the Fall Meeting at Columbus, Ohio.

November 8, 1927. The meeting was devoted largely to a discussion of the advisability of inviting the Society to hold one of its quarterly meetings in Cleveland.

November 15, 1927. Following a dinner, the Section joined with the Regional Planning Division of the Cleveland Engineering Society in a discussion of Cleveland's Lake Front Development. The average attendance during 1927, at each of the Section meetings, has been 12.

Colorado.—November 14, 1927. A dinner was held at the University Club, Denver, at which 17 members and guests were present. E. B. Gittings, Assistant Forecaster in the Denver Office of the United States Weather Bureau, presented an address on "Weather Forecasts". A final report of the Committee on Denver's Municipal Water Supply was presented by R. I. Meeker, Chairman, followed by a discussion of the subject.

* For list of Local Section Officers, Rules, etc., see 1927 Year Book, p. 104.

Dayton.—October 17, 1927. A dinner meeting was held at the Engineers Club. H. C. Boyden, M. Am. Soc. C. E., gave an illustrated lecture on "The Uses of Celite in Concrete". Attendance 50.

November 14, 1927. At the regular meeting Mr. Charles H. Shook gave an interesting talk on "The Selection and Use of Equipment for Building Construction Work", followed by a discussion. Attendance 20.

Duluth.—November 21, 1927. A luncheon held at the Kitchi Gammi Club was followed by the regular business meeting. Mr. J. F. Base presented an address on "Section Activities", with a view to stimulating interest in Section meetings, and Mr. E. W. Kelly reviewed the papers published in the November *Proceedings,* which was followed by a discussion. Attendance 18.

Iowa.—November 17, 1927. At the Annual Meeting held at the Grant Club, Des Moines, the following officers were elected: President, A. H. Fuller; Vice-President, S. M. Woodward; Secretary-Treasurer, R. B. Kittredge; Director, C. H. Young. Secretary Kittredge presented a report on the Local Sections' Conference at Denver, and Mr. C. C. Coykendall spoke on "Iowa's Road Construction Program". Following a dinner, Professor S. M. Woodward addressed the meeting on "Mississippi Flood Control", and Mr. O. W. Crowley, the retiring President, presented a talk on "The Government's Responsibility in Flood Control". Attendance 29.

Kansas (State).—November 16, 1927. A luncheon meeting was held at the Chocolate Shop, Topeka. An announcement was made of the election to Junior Membership of L. W. Miller, of Kansas University, and R. G. Cortelyou, of State Agricultural College. The regular routine business of the Section followed. Attendance 20.

Sacramento.—October 11, 1927. Mr. Gradon Oliver, Editor of *Modern Irrigation,* addressed the meeting on "Making Concrete Pipe by Centrifugal Force", and illustrated his talk by motion pictures showing the manufacture of this kind of pipe. Attendance 32.

October 18, 1927. Mr. H. D. Jerrett, Right of Way Agent of the California Highway Commission, presented a paper on "Land Appraisal". Attendance 31.

October 25, 1927. Mr. T. E. Stanton, Jr., Assistant State Highway Engineer, spoke on "Oiling Roads", describing the development of the oiled road and the scientifically designed "oil-mix" road now being so cheaply and satisfactorily constructed in California. Attendance 38.

November 1, 1927. "The Return Flow of Water" was the subject of a paper read by Mr. T. R. Simpson, of the State Division of Water Rights. Attendance 31.

Syracuse.—November 7, 1927. Following a dinner, Robert Ridgway, Past-President, Am. Soc. C. E., gave an illustrated address before the Technology Club of Syracuse and this Section, on "New York City Transportation". Attendance at the dinner, 25.

Utah.—October 31, 1927. Following a dinner held at the University Club, Salt Lake City, Professor R. B. Ketchum presented a paper on "The Design and Construction of the New Stadium at the University of Utah". Attendance 18.

Engineering Societies Library

The services of the Engineering Societies Library are available to all members who wish searches, copies, translations, etc., or advice on technical literature. A collection of modern books is also available for loan to members in North America, at moderate rentals. Correspondence should be addressed to the Director, Engineering Societies Library, 29 West 39th Street, New York, N. Y., who will gladly give information concerning the charges for the various kinds of work. A more comprehensive statement in regard to this matter will be found on pages 126 and 127 of the Year Book for 1927.

Book Notices*

(November 1 to November 30, 1927)

A. S. T. M. Tentative Standards, 1927. Phila., Am. Soc. for Testing Materials, 1927. 824 pp., diagrams, 9 x 6 in., paper, $7.00; cloth, $8.00.

The 1927 volume of Tentative Standards contains 175 specifications, including ferrous and other metals; cements; limes; gypsum and clay products; preservative coatings and petroleum products; road, water-proofing, and roofing materials; and timber.

Clays, Their Occurrence, Properties, and Uses. By Heinrich Ries. Third Edition. N. Y., John Wiley & Sons, 1927. 613 pp., illus., diagrams, maps, 9 x 6 in., cloth. $7.00.

This text brings together a great mass of data on the occurrence, physical and chemical properties, and kinds of clays. In this edition a section on bentonite and a chapter on the distribution of clays in Canada have been added.

Constructional Steelwork Simply Explained. By Oscar Faber. N. Y. and Lond., Oxford University Press, 1927. 120 pp., diagrams, 9 x 6 in., cloth. $2.00. (Gift of American Branch.)

This elementary, non-mathematical discussion of the practical design of steel work is intended for use by draftsmen, students in night schools, etc.

Descriptive Geometry. By Lawrence E. Cutter. Second Edition. N. Y., McGraw-Hill Book Co., 1927. 244 pp., diagrams, 9 x 6 in., cloth. $2.50.

This textbook substitutes for the usual method of rotation the method of choosing new projection planes. The theory is reduced to four simple principles. The text illustrates their use by detailed solutions of problems taken from various branches of engineering and from architecture.

Design and Construction of Dams. By Edward Wegmann, M. Am. Soc. C. E. Eighth Edition. N. Y., John Wiley & Sons, 1927. 740 pp., illus., pl., 12 x 9 in., cloth. $17.50.

The particular point of interest in this new edition is the inclusion of a section on multiple-arch dams, by Fred A. Noetzli, M. Am. Soc. C. E. Descriptions of a number of notable recent dams have also been added, and minor revisions have been made throughout the book.

Das Deutsche Schiedsgerichtsverfahren. By Ernst Richter. Berlin, V. D. I. Verlag, 1927. 115 pp., 8 x 6 in., paper. 3.-r. m.

This forms a concise, inexpensive guide to the German law and Court procedure in the arbitration of disputes.

Examples in the Strength and Elasticity of Materials. By G. W. Bird. Lond., Edward Arnold & Co., 1927. (Pub. in the United States by Longmans, Green & Co.). 196 pp., 8 x 5 in., cloth. $4.00. (Gift of Longmans, Green & Co.)

* The statements made in these notices are taken from the books themselves, and this Society is not responsible for them. Unless otherwise specified, the books in this list have been donated by publishers.

This book presents its subject through a collection of worked problems accompanied by the reasoning leading to the formulas involved.

Festigkeitslehre für Ingenieure. By H. Winkel. Berlin, Julius Springer, 1927. 494 pp., diagrams, 9 x 6 in., bound. 26.-r. m.

In this general textbook on the strength of materials, resistance to tension, compression, bending, torsion, etc., are first discussed. Statically indeterminate systems are then treated, followed by chapters on springs, pipes, and hollow vessels, plates, and revolving wheels and pulleys.

Geodäsie. By Gustav Förster. Berlin, Walter de Gruyter & Co., 1927. 122 pp., illus., diagrams, 6 x 4 in., cloth. 1,50 r. m.

This is a brief review of the surveying of countries and of higher geodesy, intended for those who wish a concise account of the principles and the more important calculations.

Handbook for Highway Engineers. By Wilson G. Harger and Edmund A. Bonney. Fourth Edition. N. Y., McGraw-Hill Book Co., 1927. 1721 + 32 pp., diagrams, tab., 7 x 4 in., fabrikoid. $6.00.

The text of this edition has been entirely rewritten. Chapters on road construction and on railroad grade-crossing protection have been added. The additions total 700 pages, an increase of 70% over the Third Edition.

Holzbrücken. By K. Schaechterle. Berlin u. Leipzig, Walter de Gruyter & Co., 1927. 124 pp., illus., diagrams, tab., 6 x 4 in., cloth. 1,50 r. m.

This little book gives a brief historical survey of the wooden bridge, treats of the principal varieties of wood and their properties, and discusses design, construction, types, etc.

Introduction to the Mathematics of Statistics. By Robert Wilbur Burgess. Bost., Houghton, Mifflin Co., 1927. 304 pp., diagrams, tab., 8 x 6 in., cloth. $2.50.

This book gives a general but elementary outline of the best methods of statistical analysis, with an explanation and discussion of these methods, in which no mathematical knowledge beyond that acquired in a high-school course is assumed.

Mechanics of Materials. By George Young, Jr., and Hubert E. Baxter. (Engineering Science Series.) N. Y., Macmillan Co., 1927. 451 pp., diagrams, 9 x 6 in., cloth. $4.00.

This introduction to the mechanical aspects of construction, gives the student a working knowledge of the theory underlying the design of structures.

Neuere Methoden zur Statik der Rahmentragwerke, Vol. 2: Der Bogen und das Brückengewölbe. By A. Strassner. Third edition. Berlin, Wilhelm Ernst & Sohn, 1927. 171 pp., diagrams, tab., 11 x 8 in., paper. 12.-r. m.

This book applies modern methods to the calculation of arches and arch bridges, especially those of reinforced concrete. The theory of the elastic arch is developed and then applied to the design of bridges. Tables giving the influence lines for moments in arches can be used directly for calculation. One section treats of the design of successive arches on elastic piers.

Valuation, Depreciation, and the Rate-Base. By Carl Ewald Grunsky, Past-President, Am. Soc. C. E. Second Edition. N. Y., John Wiley & Sons, 1927. 500 pp., tab., 9 x 6 in., cloth. $5.00.

Mr. Grunsky has revised and extended his analysis of the valuation problem in this new edition. New chapters on "The Standard of Value", "Elements Deserving Special Consideration When Rates Are to Be Fixed", and "A Few Recent Court Decisions", have been added.

Additions to the Reading Room

A Physical Study of the Mokelumne Pipe Line. By Lloyd T. Jones and Walter S. Weeks. (Univ. of California Publications in Eng., Vol. 2, No. 9.) Berkeley, Calif., Univ. of California Press, 1927. 81 pp., diagrams, tab., 7¼ x 10¾ in., paper.

This report includes the calculations and measurements of stresses of the Mokelumne Pipe Line, in California, which the authors hope will be of interest to those engaged in welded pipe-line construction.

Current Civil Engineering Literature

Key to Abbreviated References to Publications Indexed*

Abbreviated References.	Publication.	Place.
Am. C. Inst.	*American Concrete Institute, Proceedings* (Y.)	Detroit
A. I. E. E.	*American Institute of Electrical Engineers Journal* (M.)	New York
A. R. E. A.	*American Railway Engineering Association, Proceedings* (Y.)	Chicago
A. S. T. M.	*American Society for Testing Materials, Proceedings* (Y.)	Philadelphia
Am. Soc. C. E.	*American Society of Civil Engineers, Proceedings* (M.)	New York
Am. Soc. Mun. Impvts.	*American Society for Municipal Improvements, Proceedings* (Y.)	New York
Am. W. W. Assoc.	*American Water Works Association, Journal* (M.)	Baltimore
Am. Wood Prs. Assoc.	*American Wood Preservers Association, Proceedings* (Y.)	Chicago
Ann. P. et C.	*Annales des Ponts et Chaussees* (Bi-M.)	Paris
Ann. T. P. Belg.	*Annales des Travaux Publics de Belgique* (Bi-M.)	Brussels
Assoc. Ing. Gand.	*Annales de l'Association des Ingénieurs sortis des Ecoles Spéciales de Gand* (Q.)	Ghent
Bost. Soc. C. E.	*Boston Society of Civil Engineers, Journal* (M.)	Boston
Can. Engr.	*Canadian Engineer* (W.)	Toronto
Comwlth Engr.	*Commonwealth Engineer* (M.)	Melbourne
Cornell C. E.	*Cornell Civil Engineer* (M.)	Ithaca
Dock & Harbour	*Dock and Harbour Authority* (M.)	London
Eng.	*Engineering* (W.)	London
Eng. & Contr.	*Engineering and Contracting* (M.)	Chicago
Eng. Inst. Can.	*Engineering Institute of Canada, Journal* (M.)	Montreal
Eng. N. R.	*Engineering News-Record* (W.)	New York
Engrs. Soc. W. Pa.	*Engineers' Society of Western Pennsylvania, Journal* (M.)	Pittsburgh
Engr.	*Engineer* (W.)	London
Engrs. & Eng.	*Engineers and Engineering, Engineers' Club of Philadelphia* (M.)	Philadelphia
Gas und Wasser	*Gas und Wasserfach* (W.)	München
Gen. Clv.	*Le Génie Civil* (W.)	Paris
Gesund. Ing.	*Gesundheits Ingenieur* (W.)	Munich
Inst. C. E.	*Institution of Civil Engineers Minutes of Proceedings* (Q.)	London
Inst. Mun. & Co. Engrs.	*Institution of Municipal and County Engineers, Journal* (W.)	London
Int. Ry. Cong. Assoc.	*International Railway Congress Association, Bulletin* (M.)	Brussels
Land. Arch.	*Landscape Architecture* (M.)	Boston
Mech. Eng.	*Mechanical Engineering* (M.) *Journal of the American Society of Mechanical Engineers*	New York
Mil. Engr.	*Military Engineer* (Bi-M.)	Washington
Min. & Metal.	*Mining and Metallurgy* (M.) *American Institute of Mining Engineers*	New York
Mun. & Co. Eng.	*Municipal and County Engineering* (M.)	Indianapolis
N. E. W. W. Assoc.	*New England Water Works Association, Journal* (Q.)	Boston
N. Y. R. R. Club.	*New York Railroad Club, Proceedings* (M.)	Brooklyn
Oest. Ing. Arch. Ver.	*Oesterreichischer Ingenieur und Architekten Verein, Zeitschrift* (F.)	Vienna
Power	*Power* (W.)	New York
Rev. Gen.	*Revue Générale des Chemins de Fer* (M.)	Paris
Ry. Age	*Railway Age* (W.)	New York
Ry. Eng. & Main.	*Railway Engineering and Maintenance* (M.)	Chicago
Schw. Bauz.	*Schweizerische Bauzeitung* (W.)	Zurich
Sci. Am.	*Scientific American* (M.)	New York
Soc. Ing. Clv. Fr.	*Société des Ingénieurs Civils de France, Mémoires et Comptes Rendus* (Q.)	Paris
Tech. Gemein.	*Technisches Gemeindeblatt* (F.)	Berlin
Ver. deu. Ing.	*Verein deutscher Ingenieure, Zeitschrift* (W.)	Berlin
West. Constr. N.	*Western Construction News* (F.)	San Francisco
West. Ry. Club.	*Western Railway Club, Proceedings* (M.)	Chicago
West. Soc. Engrs.	*Western Society of Engineers, Journal* (M.)	Chicago
Zeit. Bau.	*Zeitschrift fur Bauwesen* (Q.)	Berlin
Z. d. Bauver.	*Zentralblatt der Bauverwaltung* (W.)	Berlin

* Y = Yearly; Q = Quarterly; M = Monthly; F = Fortnightly; W = Weekly.

B. Applied Mechanics

a. Mechanics of Solids (Strength of Materials)

2. Elastic Solids

The Origin of the Rankine Column Formula. Robins Fleming. West. Soc. Engrs. Oct., '27.

3. Jointed Systems

Die Experimentelle Berechnung statisch unbestimmter Systeme.* (The Experimental Calculation of Statically Indeterminate Systems.) Günter Worch. Z. d. Bauver. Oct. 5, '27.

4. Riveted Systems

The Rivet. J. C. Hanna. Engrs. & Eng. Oct., '27.

Tensile Working Stress for Rivets.* C. R. Young. Can. Engr. Nov. 8, '27.

Wind Bracing Connection Combines Welding and Riveting.* W. A. Hakin and R. G. Richards. Eng. N. R. Nov. 10, '27.

6. Heterogeneous Solids (Reinforced Materials)

Calcul d'une Pièce en Béton Armé à Section Rectangulaire, Soumise à la Flexion Composée.* (Calculation of a Concrete Object of Rectangular Section, Subjected to Compound Flexure.) Edouard Duplaix. Gen. Civ. Oct. 15, '27.

Experiments on Shearing Strength of Reinforced-Concrete Beams.* James Gilchrist. (Paper read before Section G, British Assoc.) Eng. Oct. 28, '27.

Kirchenbauten in Eisenbeton.* (Church Constructions in Reinforced Concrete.) Ludwig Hilberseimer. Z. d. Bauver. Oct. 19, '27.

b. Hydraulics

2. Physical Hydraulics

Measurement of Water in Closed Conduits.* Roy Wilkins. (Paper read before San Francisco Section, Am. Soc. C. E.) West. Constr. N. Nov. 10, '27.

The Design of Large Low-Pressure Water Conduits.* H. H. Burness. (Paper read before Section G, British Assoc.) Eng. Nov. 11, '27.

Die Geschwindigkeitsformal und das Problem der Geschwindigkeiten bei sehr kleinen Tiefen. (The Velocity Formula and the Problem of the Velocities at Very Shallow Depths.) Maximilian Matakiewicz. Oest. Ing. Arch. Ver. Oct. 28, '27.

3. Industrial Hydraulics

Conowingo Hydro-Electric Development.* H. A. Hageman. Bost. Soc. C. E. Oct., '27.

Re-Designing Catawba Station for Service on a Large Transmission System.* W. S. Lee. Am. Soc. C. E. Nov., '27.

The Conowingo Hydro-Electric Development on the Susquehanna River. Alexander Wilson. Am. Soc. C. E. Nov., '27.

The Conowingo Hydro-Electric Development on the Susquehanna River.* Discussion: William C. L. Eglin, J. V. Hogan and A. W. Clark. Am. Soc. C. E. Nov., '27.

Water Pumped Into Reservoirs for European Plants.* Oren Reed. Eng. N. R. Nov. 3, '27.

Der Umbau des Wasserwerkes Tegel der Berliner Städtische Wasserwerke A. G.* (Alterations on the Tegel Water Works of the Berlin Waterworks Company.) E. Dittmer. Gas und Wasser. Serial beginning Sept. 24, '27.

Ein eisernes Schütz als Notverschluss für die Turbinenkanäle beim Kraftwerk Dörverden a. d. Weser.* (An Iron Sluice as an Emergency Closure for the Turbine Channels on the Weser Power Plant.) Post. Z. d. Bauver. Sept. 28, '27.

Die Ausbesserung des durch Gipsquellen zerstörten Wasserstollens des Opponitzer Ybbskraftwerkes der Stadt Wien.* (Repairing the Water Tunnels of the Viennese Opponitz Ybbs Power Plant Which Were Damaged by Gypsum Springs.) Ed. Bodenseher. Schw. Bauz. Oct. 29, '27.

4. Dams

Baffle-Pier Experiments on Models of Pit River Dams.* I. C. Steele and R. A. Monroe. Am. Soc. C. E. Nov., '27.

C. Materials of Construction and General Processes

a. Lime, Cement, Mortar, Concrete, Brick, Bitumin, Timber, etc.

Thirty-Five Years of Sea-Water Exposed Concrete. Harry E. Squire. (From *World Ports.*) Eng. & Contr. Oct., '27.

b. Metals

Einfluss des Schweissens auf die Gestaltung.* (The Influence of Welding on Shaping.) A. Hilpert. Ver. deu. Ing. Oct. 15, '27.

Neue Ergebnisse der Edelstahlforschung.* (New Results of Refined Steel Research.) W. Oertel. Ver. deu. Ing. Oct. 22, '27.

Das Verhalten von Stahl bei tiefen und hohen Temperaturen.* (The Behavoir of Steel at Low and High Temperatures.) Anton Pomp. Ver. deu. Ing. Oct. 22, '27.

Die Versuchsanstalten in den deutschen Eisenhüttenwerken.* (Research Organizations in German Iron Works.) E. H. Schulz. Ver. deu. Ing. Oct. 22, '27.

Innere Spannungen in Metallen.* (Internal Stresses in Metals.) G. Sachs. Ver. deu. Ing. Oct. 22, '27.

Stahl und Eisen im Elektromaschinenbau.* (Steel and Iron in Electric Machine Construction.) Franz László. Ver. deu. Ing. Oct. 29, '27.

Die Bedeutung des Gleit- und Reisswiderstandes für die Werkstoffprüfung.* (The Significance of Slip Resistance and Cohesion in the Testing of Materials.) P. Ludwik. Ver. deu. Ing. Oct. 29, '27.

c. Preservation and Use of Materials, Painting, Waterproofing

Building Research With Special Reference to the Work of the Building Research Station.* W. N. Thomas. Inst. Mun. & Co. Engrs. Oct. 18, '27.

Zur Frage der Möglichkeiten konservierender Behandlung stark verwitterter mittelalterlicher Steinbauten in Beschränkung auf Feststellungen innerhalb Bayerns.* (On the Question of the Possibilities of the Preservative Treatment of Greatly Weathered Stone Buildings of the Middle Ages Restricted to Bavaria.) A. Eibner. Z. d. Bauver. Sept. 21, '27.

e. Earthwork, Cubage, Excavating Machinery

Earth Work by the Hydraulic Method. Discussion: DeWitt D. Barlow. Am. Soc. C. E. Nov., '27.

g. Execution of Works, Specifications

Altering a Meat-Packing Plant While in Operation.* M. J. Hess. Eng. N. R. Nov. 3, '27.
Ueber die Zusammenarbeit von Konstruktion, Betrieb und Werkstoffprüfung im Lichtbau.* (On the Co-ordination of Design, Construction and Testing of Materials in Light Construction.) H. Steudel. Ver. deu. Ing. Oct. 22, '27.

4. Of Metal

Steel Fabricators Take Up Structural Problems and Business Co-operation. Eng. N. R. Nov. 3, '27.

x. Miscellaneous

Zehn Jahre deutscher Normung. (Ten Years of German Standardization.) W. Hellmich. Ver. deu. Ing. Oct. 29, '27.

h. Foundations, Bridge Piers and Abutments

Suitability of the Various Types of Bridges for the Different Conditions Encountered at Crossings. J. A. L. Waddell. West. Soc. Engrs. Oct., '27.
The Science of Foundations—Its Present and Future.* Charles Terzaghi. Am. Soc. C. E. Nov., '27.
Designing a Fender for a Bridge Pier in Midchannel.* Eng. N. R. Nov. 17, '27.
Druckverteilung im Boden.* (Pressure Distribution in the Ground.) Backofen. Z. d. Bauver. Oct. 12, '27.

i. Coffer-dams

Revêtement Elastique et Etanche d'un Batardeau en Terre.* (Elastic and Impervious Facing of an Earth Cofferdam.) Estang. Ann. P. et C. May, '27.

k. Tunnels and Tunneling-Shield

The Shandaken Tunnel.* Discussion: W. W. Brush and Charles Goodman. Am. Soc. C. E. Nov., '27.
Mechanical Equipment Used in Driving the Moffat Tunnel.* D. W. Brunton. Mech. Eng. Nov., '27.
Ventilation of the Holland Tunnels.* Power. Nov. 1, '27.
Sewer Tunneling by Day Labor at St. Paul, Minn.* William N. Carey. Eng. N. R. Nov. 3, '27.
Method of Operating Holland Vehicular Tunnels.* Eng. N. R. Nov. 3, '27.
The Holland Vehicular Tunnel Under the Hudson River.* Frank W. Skinner. Serial beginning Nov. 11, '27.
Der Durchstich des Apennin für die Direkte Bologna-Florenz Linie* (Boring Through the Apennines for the Direct Bologna-Florenz Line.) C. Andreae. Schw. Bauz. Oct. 8, '27.

l. Construction Machinery and Tools—Drainage

175-Ton Oil-Electric Dragline Excavator.* Eng. Serial beginning Nov. 11, '27.

x. Miscellaneous

Die Entwicklung der Materialprüfungsanstalt an der Technischen Hochschule Stuttgart seit 1906.* (The Development of the Materials Testing Institute at the Stuttgart Technical High School since 1906.) R. Baumann and O. Graf. Ver. deu. Ing. Oct. 15, '17.
Die Festigkeitsaufgabe und ihre Behandlung.* (The Strength Problem and Its Treatment.) Max Ensslin. Ver. deu. Ing. Oct. 22, '27.

D. Highways

c. Construction

Canyon Road Reconstruction, Portland.* George B. Herington. West. Constr. N. Oct. 25, '27.
Mountain Springs Grade, California State Highway, Between San Diego and Imperial Valley.* West. Constr. N. Oct. 25, '27.
The Tokyo-Yokohama Highway. Joseph H. Ehlers. Cornell C. E. Nov., '27.
Relation of Road Type to Tire Wear. Discussion: Troy Carmichael. Am. Soc. C. E. Nov., '27.
Use of Calcium Chloride for Highways. H. F. Clemmer. (Paper read before Southwest Road School & Show.) Can. Engr. Nov. 1, '27.
Surface-Mixed Oiled-Gravel Road On Wyoming Plains. C. H. Bowman. Eng. N. R. Nov. 3, '27.
Road Concrete and Workmanship Control in South Carolina. E. D. Sloan, Jr. Eng. N. R. Nov. 3, '27.
Sand-Gravel as Total Aggregate for Concrete Roads.* W. V. Buck. Eng. N. R. Nov. 10, '27.
Non-Bituminous Highway Materials Reviewed. A. T. Goldbeck. (Abstract of paper read before Toronto Branch, Eng. Inst. Can.) Can. Engr. Nov. 15, '27.
Spreading Pavement Assessments, Lake Worth.* Gardner Boyd. Eng. N. R. Nov. 17, '27.
Early-Strength Concrete Patches in Paved Roads.* W. A. Stacey. Eng. N. R. Nov. 17, '27.

Fast Force-Account Road Building in North Carolina.* L. R. Ames. Eng. N. R. Nov. 24, '27.
Etude des Calcaires Destinés aux Chaussées Silicatées. Classification et Choix des Matériaux. Technique Actuelle.* (Study of Limestones Intended for Silicated Roads. Classification and Choice of Materials. Present Technique.) Deslandres. Ann. P. et C. July, '27.

h. Vehicles, Automobiles, Traffic

Analysis of Causes and Methods for Prevention of Highway Accidents.* Charles M. Upham. Engrs. & Eng. Oct., '27.
Mass-Transportation in Cities. J. Rowland Bibbins. Engrs. and Eng. Oct., '27.
Planning Streets for Traffic. A. G. Dalzell. Can. Engr. Oct. 18, '27.

x. Miscellaneous

Le Ve Congrès International de la Route Tenu à Milan et à Rome en 1926. (The 5th International Road Congress Held in Milan and Rome in 1926.) Le Gavrian. Ann. P. et C. July, '27.

E. Bridges, Viaducts, and Arches

b. Iron and Steel Bridges and Viaducts

Victoria Bridge, Rideout St., London, Ont.* John R. Rostron. Can. Engr. Oct. 25, '27.
East York-Leaside Bridge, Toronto.* Wm. Snaith. Can. Engr. Oct. 25, '27.
Building Substructure of Arthur Kill Bridges.* Eng. N. R. Nov. 10, '27.
Steel Viaduct to be Reinforced by Encasement.* R. H. Simpson. Eng. N. R. Nov. 17, '27.
Die Rheinbrücke Düsseldorf-Neuss.* (The Dusseldorf-Neuss Rhine Bridge.) Schenkelberg. Z. d. Bauver. Oct. 19, '27.

d. Concrete and Reinforced Concrete Bridges and Viaducts

Concrete Arch Bridge Over the Mississippi.* M. S. Grytbak. Eng. N. R. Nov. 10, '27.
Le Nouveau Pont en Béton Armé Construit sur la Meuse à Heer-Agimont. (The New Reinforced Concrete Bridge Over the Meuse at Heer-Agimont.) E. Claeys and Ch. Yon. Ann. T. P. Belg. Oct., '27.
Eine Eisenbetonbrücke über die Themse bei Reading.* (A Ferro Concrete Bridge Over the Thames at Reading.) Eger. Z. d. Bauver. Sept. 28, '27.
Neuere schweizerische Eisenbeton-Brückentypen.* (Recent Swiss Types of Reinforced Concrete Bridges.) M. Ros. Schw. Bauz. Oct. 1, '27.
Zur Zerstörung der Rheinbrücke bei Tavanasa.* (On the Destruction of the Rhine Bridge at Tavanasa.) M. Ros. Schw. Bauz. Oct. 29, '27.

f. Suspension Bridges, Transfer Bridges

The Eye-Bar Cable Suspension Bridge at Florianopolis, Brazil. Discussion: F. N. Menefee and T. Kuo. Am. Soc. C. E. Nov., '27.
A Monumental Bridge.* Sci. Am. Nov., '27.
Pont Suspendu Rigide de Montjean, sur la Loire, avec Fermes en Arc à Trois Articulations.* (Montjean Rigid Suspension Bridge Over the Loire, with Triple Articulated Arched Trusses.) G. Leinekugel Le Cocq. Gen. Civ. Oct. 8, '27.

g. Swing, Bascule, Lift, Floating, Oscillating Bridges; Traveling Cranes

Erecting Cranes for the Sydney Harbour Bridge.* Engr. Oct. 28, '27.
Direct-Hoist Lift Bridge; Rock Island Lines.* Eng. N. R. Nov. 3, '27.

h. Computation, Tests, etc.

Sur Une Méthode de Calcul des Poutres Continues.* (On a Method of Calculating Continuous Beams.) Cointe. Ann. P. et C. July, '27.
Calcul de la Poutre Simple ou Continue Renforcée par une Membrure Supérieure de Forme Parabolique.* (Calculation of a Simple or Continuous Beam Reinforced by an Upper Member of Parabolic Shape.) Léon Légens. Gen. Civ. Oct. 22, '27.

x. Miscellaneous

Suitability of the Various Types of Bridges for the Different Conditions Encountered at Crossings. J. A. L. Waddell. West. Soc. Engrs. Oct., '27.

F. Inland Waters

b. Canals (General Articles)

Der Marseille-Rhône-Kanal mit dem Rove-Tunnel und seine wirtschaftliche Bedeutung.* (The Marseille-Rhône Canal with the Rove Tunnel and Its Economic Importance.) Syffert. Z. d. Bauver. Oct. 5, '27.

c. Regulation of Waterways—Volume of Discharge, Freshets, Floods, Soundings

Maximum Flood Discharge in San Joaquin Valley, California.* Oren Reed. Am. Soc. C. E. Nov., '27.
Modification of Bell's Bund System Simplifies River Control.* P. Claxton. Eng. N. R. Nov. 3, '27.
Flood Rainfall in New England.* H. K. Barrows. Eng. N. R. Nov. 17, '27.
Today in the Mississippi Flood Area.* W. W. DeBerard. Eng. N. R. Serial beginning Nov. 24, '27.
Some Aspects of New England's Greatest Flood. John W. Shaver. Eng. N. R. Nov. 24, '27.
Zur Rhein-Hochwasserkatastrophe vom 25 September, 1927.* (The Rhine Flood of September 25, 1927.) Schw. Bauz. Oct. 15, '27.

f. Supply, Sources of Water, Drains and Reservoirs

Travaux de Percements de Lacs Exécutés en Catalogne. (Tapping Lakes in Catalonia.) Bucherer. Soc. Ing. Civ. Fr. May, '27.

g. Consolidation of Banks, Leakage, etc.

Deepening a Rock-Filled Channel.* W. H. Abbott. Eng. & Contr. Oct., '27.
Experimental Work at Niagara Falls.* Can. Engr. Nov. 15, '27.

G. Maritime Works

a. Behavior of Movements of the Ocean, Winds, Waves, Tides, Currents

Tides and Their Engineering Aspects.* Edward Godfrey, William Barclay Parsons, T. Kennard Thomson, H. F. Dunham, and Ralph Bennett. Am. Soc. C. E. Nov., '27.
Récapitulations Décennales des Observations de Marées Faites sur l'Escaut Maritime et ses Affluents Soumis à la Marée Pendant la Période 1911–1920. (Decennial Summary of Tide Observations on the Scheldt and Its Tidal Tributaries Covering the Period 1911–1920.) Ann. T. P. Belg. Oct., '27.

c. Vessels and Maritime Navigation, Lighthouses, Buoys, Various Signals

The Motor Passenger and Cargo Vessel Itapé. Engr. Nov. 11, '27.
La Ligne de Navigation Anglo-Française Tilbury-Dunkerque.* (The Anglo-French Tilbury-Dunkirk Navigation Line.) P. Caufourier. Gen. Civ. Oct. 22, '27.

h. Wharves, Mooring Buoys, Harbor Equipment

The Shipment of Coal with Reference to the Lay-Out of Approach Roads and Sidings.* Harold M. Bird. Dock and Harbour Nov., '27.
Murs de Soutènement et Murs de Quai "à Echelle." (Step Type Retaining Walls and Quay Walls.) A. Coyne. Gen. Civ. Oct. 29, '27.

i. Harbors

Note sur un Programme d'Equipement du Bassin du Président Wilson et de Rénovation de l'Outillage de Divers Bassins au Port de Marseille.* (Note on a Program for Equipping the President Wilson Basin and Renovating the Equipment of Various Basins in the Port of Marseille.) Sainflou. Ann. P. et C. July, '27.

H. Railroads. Street and Interurban Railways. Automobiles. Aeronautics

a. Railroads

1. General Articles
Florida Roads Have Experienced a Phenomenal Development.* Ry. Age Serial beginning Nov. 19, '27.
3. Roadbed (Grading Construction Work)
Tracklaying Practice on the Rock Lines.* Eng. N. R. Nov. 10, '27.
4. Track
I. C. C. Bureau of Safety Reports on Transverse Fissures.* Ry. Age Nov. 12, '27.
6. Rolling Stock (Locomotives, Cars) Fuel
Freight Car Derailments.* T. H. Symington. Ry. Age Oct. 22, '27.
Notes on the Steam Locomotive.* H. A. F. Campbell. Ry. Age Nov. 5, '27.
Steel-Frame Repair Shop for Locomotives; C., I. & L. Ry.* Eng. N. R. Nov. 10, '27.
The Possibilities of the Motor Rail Car.* A. Guidoni. Ry. Age Nov. 12, '27.
Wabash Employs Novel Plan to Enlarge Locomotive Shops.* Ry. Age Nov. 19, '27.
2-8-4 Type Locomotives for the Chicago & North Western.* Ry. Age Nov. 19, '27.
Le Traitement Sorbitique des Bandages de Roues pour Véhicules de Chemins de Fer et de Tramways.* (The Sorbitic Treatment of Treads of Wheels for Railway and Tramway Vehicles.) Edmond Marcotte. Gen. Civ. Oct. 22, '27.
7. Use of Electricity
The Collection of Current from Overhead Contact Wires.* R. E. Wade and J. J. Linebough. A. I. E. E. Nov., '27.
Catenary Design for Overhead Contact Systems. H. F. Brown. A. I. E. E. Nov., '27.
Die 15 kV Einphasenstrom-Fahrleitungen der Schweizerischen Bundesbahnen.* (The 15 kV Single-Phase Trolley Lines of the Swiss State Railways.) H. W. Schuler. Schw. Bauz. Serial beginning Oct. 8, '27.
8. Stations, Terminals, Engine Houses, Shops
Modern Yard Operation. W. B. Rudd. West. Ry. Club. Sept., '27.
Country's Largest Transfer Station Is Placed in Service.* Ry. Age Nov. 5, '27.
The Control of Emergency Material Stocks.* U. K. Hall. (From paper read before Am. Ry. Bridge & Bldg. Assoc.) Ry. Age Nov. 5, '27.
The Lighting of Railroad Yards.* H. E. Mahan and R. J. Swackhamer. (Paper read before Illuminating Eng. Soc.) Ry. Age Nov. 12, '27.

b. Special Railroads

2. Aerial Railroads (Funicular, Monorail)
Aerial Tramways.* F. C. Carstarphen. Am. Soc. C. E. Nov., '27.
3. Narrow Gauge. Light Railways.
Die schmalspurige Bernhardin-Bahn als Verbindung Ostschweiz-Graubünden-Tessin.* (The Narrow Gage Bernhardin Railway as a Connection for Ostschweiz-Graubünden-Tessin.) Schw. Bauz. Oct. 22, '27.

d. Street Railways, Elevated Railways, Subways.

1. General Articles

Der weitere Ausbau der Berliner Untergrundbahnen.* (The Further Development of the Berlin Subways.) Z. d. Bauver. Sept. 21, '27.

e. Automobiles

1. Steam Automobiles

Le XXIe Salon de l'Automobile et du Cycle (Paris, 6-16 octobre 1927).* (The 21st Automobile and Cycle Exhibition, Paris, Oct. 6–16, 1927.) G. Delanghe. Gen. Civ. Serial beginning Oct. 15, '27.

I. Municipal Water-Works. Agricultural Engineering. Irrigation

a. General Articles

New Water Supply for Kansas City to be Completed in 1928.* Eng. N. R. Nov. 3, '27.

Municipal Water Supply of La Grande, Oregon. L. R. Stockman. West. Constr. N. Nov. 10, '27.

b. Hydrology, Water Resources

Notice sur les Captages d'Eaux Souterraines dans les Alluvions de l'Arno à Florence.* (Note on the Collection of Subterranean Waters in the Alluvia of the Arno at Florence.) Sentenac. Ann. P. et C. May, '27.

c. Dams and Reservoirs

The Big Dalton Multiple-Arch Dam.* West. Constr. N. Oct. 25, '27.

Notes on Arched Gravity Dams.* Discussion: Lars R. Jorgensen and P. Wilhelm Werner. Am. Soc. C. E. Nov., '27.

Problems in Concrete Dam Construction on the Pacific Coast. Discussion: Arthur P. Davis and M. M. O'Shaughnessy. Am. Soc. C. E. Nov., '27.

Methods of Controlling Flow of Water.* F. Johnstone Taylor. Can. Engr. Nov. 1, '27.

Experimental Work on Small-Scale Models of Arch Dams.* Ivan E. Houk. (From *New Reclamation Era.*) West. Constr. N. Nov. 10, '27.

Ingenious Form-Handling on Covered Reservoir.* Eng. N. R. Nov. 24, '27.

Le Barrage d'Essais de Stevenson Creek (Etats-Unis). Résultats des Expériences.* (The Stevenson Creek, U. S. A., Test Dam. Results of Tests.) P. Caufourier. Gen. Civ. Oct. 15, '27.

Die Versuchs-Gewölbestaumauer in Kalifornien.* (The Experimental Arch Dam in California.) N. Kelen. Oest. Ing. Ver. Sept. 30, '27.

d. Analysis and Purification of Water

Water Treatment and Railroad Efficiency. E. M. Grime. Am. W. W. Assoc. Oct., '27.

New Miami, Florida Water Softening Plant.* L. R. Howson. Am. W. W. Assoc. Oct., '27.

The One-Ton Liquified Chlorine Gas Container. Robert T. Baldwin. Am. W. W. Assoc. Oct., '27.

Sand Filter Plant, Launceston, Tasmania. G. D. Balsille. Comwlth. Engr. Oct., '27.

Chlorination of Water Supplies. J. M. Mathew. (Paper read before First Commonwealth Conference on Public Health Eng.) Comwlth. Engr. Oct., '27.

The Influence of Plankton on Water Supplies. E. S. Stokes. (Abstract of paper read before First Commonwealth Conference on Public Health Eng.) Comwlth. Engr. Oct., '27.

New Water Softening Plant for Beverly Hills, California.* R. L. Derby. West. Constr. N. Oct. 25, '27.

Operation of Rapid Sand Filters. S. T. Powell. Can. Engr. Nov. 8, '27.

Development of Water Treatment at Indianapolis.* Harry E. Jordan. Eng. N. R. Nov. 10, '27.

e. Distribution of Water

Grounding Electric Circuits on Pipes.* Charles F. Meyerherm. Am. W. W. Assoc. Oct. '27.

Comparative Tests of Friction Losses in Cement Lined and Tar Coated Cast Iron Pipe.* Melvin L. Engr. Am. W. W. Assoc. Oct., '27.

The McKenzie River Water Supply for Eugene, Oregon.* Frank Fay Eddy. West. Constr. N. Oct. 25, '27.

Some Phases of Irrigation Financing. Discussion: Morrough P. O'Brien. Am. Soc. C. E. Nov., '27.

The New Waterworks Pumping Station for Portsmouth.* Engr. Nov. 4, '27.

Large Diameter Metal Flumes.* A. C. Norton. West. Constr. N. Nov. 10, '27.

Die Korrosion von Eisen unter Wasserleitungswasser.* (The Corrosion of Iron Due to Water in Mains.) J. Tillmans and others. Gas und Wasser. Serial beginning Aug. 27, '27.

J. Sewerage. Sewage and Refuse Disposal

a. Sewers and Drains

Orange County Cities Joint Ocean-Outfall Sewer.* Chester A. Smith. West. Constr. N. Oct. 25, '27.

An Unusual Type of Combination Storm and Sanitary Sewer.* J. F. Brown. Eng. N. R. Nov. 10, '27.

Mar Vista Avenue Sewer District and Pumping Plant, Los Angeles.* W. C. Sawyer. West. Constr. N. Nov. 10, '27.

b. Sewage Disposal, Purification

Two Years, Operation of the Sewage Treatment Plant at Worcester, Mass. Bost. Soc. C. E. Oct., '27.
The Sewage Disposal Problem of Los Angeles, California. Discussion: A. M. Rawn. Am. Soc. C. E. Nov., '27.
Stream Pollution in the Pacific Northwest. Discussion: Augustus Smith, and A. H. Dimock. Am. Soc. C. E. Nov., '27.
Sewage-Works Construction Methods at Akron, Ohio.* Eng. N. R. Nov. 17, '27.
Operating Results of the Essen Activated-Sludge Plant.* Karl Imhof and Gordon M. Fair. Eng. N. R. Nov. 17, '27.
Study of Sewage Settling Tank Design.* C. H. Capen, Jr. Eng. N. R. Nov. 24, '27.
Die Klärgasgewinnung auf der Stuttgarter Hauptkläranlage. (Recovery of Gas from Clarification Installations at the Main Stuttgart Disposal Plant.) W. Sohler. Gas und Wasser. Sept. 24, '27.

c. Refuse Disposal

Les Ordures Menageres de Paris et de sa Banlieue. Leurs Propriétés et leur Abondance.* (Household Refuse of Paris and Its Suburbs. Its Properties and Quantity.) Girard. Gen. Civ. Oct. 8, '27.

K. Heat Engines

a. Steam Engines, Boilers

The Sulzer 1 500 lb. Boiler.* Comwlth. Engr. Oct., '27.

b. Steam Turbines

Small Steam-Turbines.* George A. Orrok. Engrs. Soc. W. Pa. July, '27.
Higher Steam Pressures, and Their Application to the Steam to the Turbine.* A. H. Law and J. P. Chittenden. (Paper read before Inst. C. E.). Eng. Serial beginning Nov. 11, '27.

L. Electricity

b. Distribution and Transmission of Electricity

1. Power Plants

Carrier Current and Other Vacuum Tube Applications for Central Stations.* T. A. E. Belt and T. Johnson. West. Soc. Engrs., Oct., '27.
The Ferrybridge Station of the Yorkshire Electric Power Company.* Eng. Oct. 21, '27.
The Ferrybridge Station of the Yorkshire Electric Power Company.* Engr. Serial beginning Oct. 28, '27.
Power-House Extensions at Stokes-on-Trent.* Engr. Nov. 11, '27.

2. Long-Distance Transmission of Energy

Test of Full-Size Suspension Type Transmission Tower.* Eng. N. R. Nov. 17, '27.

c. Electric Lighting

1. Arc, Incandescent, Mercury, Vapor, Neon, Lamps, etc.

The Mechanical Strength of Metal-Filament Electric Lamps. F. Murgatroyd. (Paper read before British Assoc.) Eng. Nov. 4, '27.

2. Uses

Street Lighting Regarded as an Illumination Problem.* J. W. T. Walsh. Inst. Mun. & Co. Engrs. Nov. 15, '27.
The Street Lighting of London.* W. J. Jones. Inst. Mun. & Co. Engrs. Nov. 15, '27.

e. Electrochemistry and Electrometallurgy

Die Oele als Werkstoffe in der Elektrotechnik. (Oils as Materials in Electrical Engineering.) v. d. Heyden and Typke. Ver. deu. Ing. Oct. 1, '27.

f. Signals and Communication

Round Island Wireless Beacon Station.* Dock & Harbour. Nov., '27.

M. Architecture

a. Educational, Government and Scientific Buildings

La Nouvelle Salle de Concert Pleyel, à Paris. L'Acoustique des Salles de Spectacles.* (The New Pleyel Concert Hall in Paris. The Acoustics of Auditoriums.) P. Calfas. Gen. Civ. Oct. 29, '27.

b. Business and Commercial Buildings

Tower 256 Ft. High Tops 24-Story Building.* Eng. N. R. Nov. 24, '27.

d. Storage Buildings

New Terminal Warehouse at Montreal.* John J. Shea. Can. Engr. Oct. 18, '27.

g. Other Buildings

Building for the Ages.* J. Bernard Walker Sci. Am. Nov., '27.

i. Fire and Earthquake Protection

Neuzeitiger Blitzschutz.* (Modern Lightning Protection.) Rudolf Feuchtinger. Oest. Ing. Arch. Ver. Oct. 14, '27.

O. Administration. Legislation. Economics. Statistics

d. Administrative and Financial Management of Means of Communication.

1. General Questions

L'Utilisation des Grands Réseaux de Transport.* (The Utilization of Large Transportation Systems.) Jean Maroger. Soc. Ing. Civ. Fr. May, '27.

5. Railroads and Street Railways

The Relation of Highway Transportation to the Railway. Discussion: M. H. Gerry, Jr. Am. Soc. C. E. Nov., '27.

g. Engineering Education

Status of the Industrial Engineer. A. J. T. Taylor. (From paper read before Inst. Engrs. & Shipbldrs. of Scotland.) Can. Engr. Nov. 8, '27.

Q. Surveying and Geodesy

Quantity Surveying and the Architect. C. L. Weeks. (Paper read before Am. Inst. Archts.) Can. Engr. Nov. 15, '27.

S. City Planning

Basic Information Needed for a Regional Plan. Discussion: Russell V. Black, George F. Unger, Arthur A. Shurtleff, Hale J. Walker, Joseph W. Shirley, Guy Wilfrid Hayler, William Bowie and Howard Strong. Am. Soc. C. E. Nov., '27.

Housing and the Regional Plan. Discussion: James Ford, Benjamin H. Ritter, Bernard J. Newman, Bleeker Marquette, W. C. Rice, E. M. Bassett, Frank B. Williams, and U. S. Grant, 3d. Am. Soc. C. E. Nov., '27.

Charleston's Waterfront Driveways.* Roy S. MacElwee. Dock & Harbour. Nov. '27.

Forecast: The Regional Community of the Future.* Discussion: Robert Kingery, Howard Strong, William J. Wilgus, Frederic H. Fay, and William T. Lyle. Am. Soc. C. E. Nov., '27.

Cultural Opportunities in Regional Planning. Discussion: Henry V. Hubbard, James Sturgis Pray, Noulan Cauchon, E. M. Bassett, Jacob L. Crane, Jr., Charles Wellford Leavitt, Morris Knowles, Harold M. Lewis, R. H. Randall, and C. H. Howell. Am. Soc. C. E. Nov., '27.

Employment Service

The Engineering Societies Employment Service is under the joint management of the National Societies of Civil, Mining, Mechanical, and Electrical Engineers. A Chicago office is maintained in co-operation with the Western Society of Engineers, and a San Francisco office, in co-operation with the Engineers' Club of San Francisco and the California Section of the American Chemical Society. The Service is available only to the several memberships and is maintained by contributions from the Societies and their individual members who are directly benefited.

Offices.—Eastern Office, 31 West 39th Street, New York, N. Y., Walter V. Brown, Manager; Chicago Office, 53 West Jackson Boulevard, Room 1736, Chicago, Ill., A. Krauser, Manager; and San Francisco Office, 57 Post Street, Room 715, San Francisco, Calif., Newton D. Cook, Manager.

Men Available.—Under this heading, brief announcements will be published without charge. These announcements will not be repeated, except on request received after an interval of one month. Names and records will remain in the active files of the Service for a period of three months, and are renewable on request. Notices for *Proceedings* should be addressed to Employment Service, 31 West 39th Street, New York, N. Y., and should be received prior to the first of the month.

Opportunities.—A Bulletin of engineering positions available is published weekly and may be obtained by members of the Societies concerned at a subscription rate of $3 per quarter, or $10 per annum, payable in advance. Positions which are not filled promptly as a result of publication in the Bulletin, may be announced herein.

Voluntary Contributions.—Members obtaining positions through the medium of this Service are invited to co-operate with the Societies in the financing of the work by nominal contributions made within thirty days after placement, on the basis of 1½% of yearly salary; temporary positions (of one month or less), 3% of total salary received. The income contributed by the members, together with the finances appropriated by the four Societies named, will be sufficient, it is hoped, not only to maintain but to increase and extend the Service.

Replies to Announcements.—Replies to announcements published herein, or in the Bulletin, should be addressed to the key number indicated in each case, with a two-cent stamp attached for re-forwarding, and forwarded to the Employment Service at the address given. Replies received by the Service after the positions to which they refer have been filled, will not be forwarded.

POSITION AVAILABLE

ESTIMATOR, thoroughly experienced on building construction work, with contractor. Permanent. Salary, $75–$85 per week. Location, New York City. X–3733.

MEN AVAILABLE

CIVIL ENGINEER, Assoc. M. Am. Soc. C. E.; age 39; married. Construction cost-keeping, office and field engineer; general experience in design and construction, railroads, highways, reinforced concrete and steel buildings, sewers and water-works, mapping. A–1343.

CIVIL ENGINEER, M. Am. Soc. C. E.; college graduate; age 45. Twenty-six years' experience on design and construction of water-works systems, dams, reservoirs, aqueducts, tunnels, filtration plants, pumping stations, pipe lines, roads, buildings, including eight years in responsible charge of design, construction, or both. Several years in responsible charge of operation of water-works systems. Experienced in appraisals and sales promotion. Good knowledge of French. Location, immaterial. A–2468.

CIVIL ENGINEER, Assoc. M. Am. Soc. C. E.; University degrees; age 43; married. Seventeen years' experience, field work and construction, practically everything except structural steel. Best of references. Desires permanent position in place of 5 000 to 50 000 inhabitants. Now employed, but available on ten days' notice. Location preferred, anywhere in United States. B–285.

CIVIL ENGINEER, Assoc. M. Am. Soc. C. E., assistant to superintendent of construction; age 39; married. Four years, general construction, field and office; one year, bridge inspector; one year, special engineer on construction; eight years, valuation department, investigation of subsidence areas; two years, manufacturing—not engineering. Location preferred, New York. B–465.

CIVIL ENGINEER, M. Am. Soc. C. E.; licensed civil engineer; former professor of civil engineering desires a position in charge of structural, hydro-electric, or civil engineering work. Possesses excellent all-round experience in civil engineering, but has specialized in structural work. B–3354.

CIVIL ENGINEER, Assoc. M. Am. Soc. C. E.; age 34. Ten years' experience in building work, estimating, designing, and some outside work, particularly reinforced concrete. Five years in last position as assistant to both district engineer and chief estimator of concern dealing in reinforcing steel and other building materials. B–4442.

CONSTRUCTION SUPERINTENDENT, Jun. Am. Soc. C. E.; Graduate Civil Engineer; age 30; married. Experienced in taking full charge of important building construction projects; forceful executive; intimate knowledge of costs and details of all trades. Available at once. Location preferred, Metropolitan District, New York. B–4938.

EXECUTIVE, MANAGER, CIVIL ENGINEER, Assoc. M. Am. Soc. C. E.; age 46; married. Twenty-five years' experience in Tropics, last five years as general agent and manager of one of largest American oil corporations. Intimate knowledge of Spanish language and Latin-American character and traits. Capable, sober, responsible. Location, preferably in Latin America, but will go anywhere. B–5073.

ENGINEER OR SUPERINTENDENT OF CONSTRUCTION, M. Am. Soc. C. E. Twenty-five years' experience in direct charge of work, heavy foundations, dams, hydro-electric installations, power houses, etc., plant design, management. B–5540.

CONSTRUCTION SUPERINTENDENT OR RESIDENT ENGINEER, Assoc. M. Am. Soc. C. E.; age 40; single. Twenty years' experience on construction of hydro-electric and steam-electric plants, hotel and factory buildings, sewerage and water mains, street paving, etc. In responsible charge of construction of same for fifteen years. Willing to go anywhere. B-6942.

ENGINEER, age 25; married; with three years' experience in general surveys; both field and office work; also three years' experience in designing, detailing, and estimating reinforced concrete structures and selling steel building products. Desires permanent connection. Location preferred, foreign. B–7185.

RESIDENT ENGINEER OR DRAFTSMAN, Jun. Am. Soc. C. E.; age 29; married; experienced in railroad construction, transmission line surveys, design and construction, highway location, mine surveys, and mapping. Neat and rapid draftsman, rapid and accurate field engineer. Can produce results. Location preferred, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, Pennsylvania. B–9582.

CONSTRUCTION ENGINEER, age 27; single. Eight years' general construction, foundations and underpinning, grade-crossing eliminations, concrete bridges, hotel and office buildings, sewers and disposal works, property development, marine construction, and various types of concrete structures. Also, interested in South American work. Location, anywhere. B–9955.

CHIEF OF PARTY OR CONSTRUCTION SUPERINTENDENT, technical education; age 38; married. Experienced in railroad surveying, hydro-electric plant, tunnels, bridge surveys, concrete foundations, pile-driving, municipal work. Location preferred, New York City, Jersey City. C–1635.

CONSTRUCTION OR SALES ENGINEER, Affiliate, Am. Soc. C. E.; graduate. Long experience in mechanical work, drawing, and machinery. Thirty months' experience in construction work on dams, highways, surveying, and mapping. Two and one-half years, professor of an agricultural college. Can master well correspondence and reports in English and Portuguese. At present with a large American company in Brazil. Will go anywhere. C–1678.

EXECUTIVE ENGINEER, Assoc. M. Am. Soc. C. E.; age 35; married. Thirteen years in charge of engineering, construction, estimating, purchasing, and supervising construction and business detail for prominent construction company. Capable executive and organizer. Open for engagement with public utility, industrial corporation, or contracting company. C–1904.

CIVIL ENGINEER, M. Am. Soc. C. E.; Licensed Civil Engineer in New Jersey; specialist in construction, and structural engineer for design, supervision, or sales. Thorough knowledge of Asiatic exports. C–2148.

CONSTRUCTION ENGINEER, M. Am. Soc. C. E.; Graduate Engineer; age 43; married. Well-rounded experience, surveying, conveying machinery, structural steel, plate steel, bridges, foundations, reinforced con-

crete, sewers, dredging, pavements. Responsible charge of government and private contracts. Estimating, designing, selling. Will go anywhere. C–2169.

CIVIL ENGINEER, Jun. Am. Soc. C. E., M. I. T. graduate, 1926. Six months, engineer, timekeeper, clerk, and estimating on reinforced concrete building construction. Six months running lines interior of Venezuela with transit and planetable stadia, some triangulation. Speaks Spanish. Quickly adaptable to new work. Prefers location in field. C–2358.

CONSTRUCTION ENGINEER; University training; age 29; single. Seven years' varied experience as chief of field parties, railroad, highway, and transmission line surveys; also assistant engineer on paving, railroad, and miscellaneous construction, including tunnels and viaducts. C–2823.

POWER CONSTRUCTION ENGINEER, Jun. Am. Soc. C. E.; age 27; married. Qualified to be in charge of field engineering as assistant construction engineer on power plants, transmission lines, dams, and hydraulic works, or to assist in structural and concrete design for power structures. Location, no preference. C–3351.

CIVIL ENGINEER, SALES ENGINEER OR OFFICE MANAGER, Assoc. M. Am. Soc. C. E.; M. I. T. graduate; age 50; married. Eight to ten years, drafting, estimating, and designing of structural steel. Fifteen years in foreign countries doing engineering work, selling, and working on sales promotion. Has working knowledge of both Spanish and Portuguese. C–3362.

CIVIL ENGINEER, M. Am. Soc. C. E., wishes consultation and investigation work. Thirty years' experience, railroad construction and financing; fifteen years, lumber business: all work, cutting to markets and rail and marine transportation; good knowledge forestry and some tropical timbers. Also, many investigations both engineering and financial of projects offered for investment or development. Present address, New York. C–3579.

CIVIL ENGINEER, age 25; single. Have had experience in allotment work, sewer and highway construction. Location preferred, Central or Northeast. C–3754.

GRADUATE CIVIL ENGINEER; age 27; single. Experienced in oil exploration, electrical, and mechanical design, development, manufacture, and field operation of engineering equipment. Would like position as Junior Executive or Production Engineer. Location preferred, optional. C–3780.

HYDRO-ELECTRIC ENGINEER, M. Am. Soc. C. E.; age 43; married. Last seven years, district engineer for consulting firm of hydro-electric engineers, in charge of surveys, construction, hydro-developments, and mountain resort developments. Available on account of restricted field. Location, immaterial. C–3806.

CONSTRUCTION ENGINEER, Jun. Am. Soc. C. E., age 24; single. Experience includes resident engineer in charge of location and construction of steel fabricating plant and shop work in steel mills and oil fields. Also experienced in structural steel estimating, design, and detailing. C–3844.

CIVIL ENGINEER, Affiliate, Am. Soc. C. E. Twenty-one years' experience, construction and operation, cement plants, and opening and operating quarries. Will go anywhere on earth. Unusual success in handling men of many nationalities. Can successfully handle any cement plant or quarry. C–3885.

Membership

(From November 2 to December 6, 1927)

Additions

Members	Date of Membership.	
ADAIR, Arthur Chapman. Valuation Engr., Treasury Dept., Bureau of Internal Revenue, Eng. Div. (Res., 1516 Columbia Rd.), Washington, D. C.	Assoc. M.	Nov. 14, 1927
ADAMS, Ray. 916 Ridgewood, Ames, Iowa.	Jun.	Oct. 10, 1927
ALLIGER, HasBrouck Jansen. 1421 Arch St., Room 401, Philadelphia, Pa.	Jun.	Nov. 14, 1927
ARBENZ, Herman Leonard. City Engr. (Res., National Rd., Pleasant Valley), Wheeling, W. Va.	M.	Nov. 14, 1927
ARCHIBALD, George Buttles. Asst. Engr. in Chg., Bureau of Water Development, 209 Pacific Bldg., San Diego, Calif.	M.	Nov. 14, 1927
ARMSTRONG, Thomas Hudson. Designing Engr., Pacific Coast Steel Co., Room 501 Rialto Bldg., San Francisco, Calif.	M.	Nov. 14, 1927
BACKES, Edward William. Gen. Foreman, B. & M. R. R., 277 Washington St., Winchester, Mass.	Jun. Assoc. M.	Oct. 2, 1922 Nov. 14, 1927
BADER, Edward Lawrence, Jr. Engr. and Estimator with Edward L. Bader and Daniel S. Bader Constr. Co., Virginia and Mediterranean Aves., Atlantic City, N. J.	Jun.	Nov. 14, 1927
BAILEY, Paul Shields. Bridge Engr., State Highway Dept. (Res., 898 South Josephine St.), Denver, Colo.	Assoc. M.	Oct. 10, 1927
BAILIFF, Norman Boyd. Draftsman and Hydrographer, Pacific Gas & Elec. Co., Fall River Mills, Calif.	Jun.	Oct. 10, 1927
BAKER, Scott Alexander. Asst. City Engr. (Res., 2118 South Logan St.), Lansing, Mich.	Assoc. M.	Nov. 14, 1927
BARROWS, Lambert Battin, Jr. 432 Grand Ave., Brooklyn, N. Y.	Jun.	Nov. 14, 1927
BARRUS, Arthur William. Engr., William J. Taylor Co., 342 Madison Ave., New York (Res., 465 Senator St., Brooklyn), N. Y.	Assoc. M.	Nov. 14, 1927
BERGSTROM, Myron Francis. 2819 Kingman Boulevard, Des Moines, Iowa.	Jun.	Nov. 14, 1927
BERNSTEIN, A. Jordan. Cons. Engr., 40 East 49th St. (Res. 2953 Decatur Ave.), New York, N. Y.	M.	Aug. 29, 1927
BINKLEY, Thad Christian. Office Asst., Thebo, Starr & Anderton, Box 1245, Stanford University, Calif.	Jun.	Oct. 10, 1927
BIRCH, Fred Graham. Secy.-Treas., S. Birch & Sons Constr. Co., Box 1436, Great Falls, Mont.	Assoc. M.	Nov. 14, 1927
BLOOM, Abraham. 622 West Front St., Plainfield, N. J.	Jun.	Nov. 14, 1927
BORTON, Homer Thompson. 514 Fifth St., Oakmont, Pa.	Jun.	Nov. 14, 1927
CADMAN, Charles Keeney. Safety Engr., Federal Mutual Liability Insurance Co., 206 Sansome St., San Francisco, Calif.	M.	Nov. 14, 1927
CANALS, César Socorro. Guayama, Porto Rico.	Jun.	June 6, 1927
CARMICHAEL, David Watson. 160 Watchung Ave., North Plainfield, N. J.	Jun.	Nov. 14, 1927
CARNAHAN, Charles Trunnell. 1132 West Kensington Rd., Los Angeles, Calif.	Jun.	Nov. 14, 1927
CARPENTER, Wilfred Gilbert. Monticello, N. Y.	Jun.	Oct. 10, 1927
CHAMBERLAIN, Joseph Jenks, Jr. Archt.-Engr. (Smith-Chamberlain), 1005 Commercial Bldg., Dayton, Ohio.	Jun. Assoc. M. M.	Oct. 3, 1911 Mar. 13, 1917 Oct. 10, 1927
CHASE, Edward. Holden, Mass.	Jun.	Oct. 10, 1927
CHRISTIAN, Francis Griffith. Asst. Engr., Tallassee Power Co., Box 623, Badin, N. C.	Jun. Assoc. M.	Oct. 12, 1925 Nov. 14, 1927
CLAYTON, Walter Croft. Asst. Aeronautical Engr., Halpin Development Co. (Res., Laredo Bldg., Apartment D, Laredo and East McMillan St.), Cincinnati, Ohio.	Jun.	Nov. 14, 1927
CLEAVINGER, David Sprong. 2501 I St., Sacramento, Calif.	Jun.	Oct. 10, 1927
CLOOS, George Phillip. Junior Engr., Structural Bureau, New York and Queens Elec. Light & Power Co., 9416 Park Lane South, Woodhaven, N. Y.	Jun.	July 11, 1927
CORTELYOU, Rushton Gardner. Chase D 24, Soldiers Field, Boston, Mass.	Jun.	Oct. 10, 1927
CRAIG, Wallace Dewey. Care, Standard Oil Co. of Louisiana, 701 Ry. Exchange Bldg., Chicago (Res., 1418 Noyes St., Evanston), Ill.	Jun. Assoc. M.	June 16, 1924 Nov. 14, 1927
CROSS, Ralph Upton. Asst. to Pres., E. J. Cross Co. (Res., 6 Wheeler Ave.), Worcester, Mass.	Assoc. M.	Nov. 14, 1927
CRUTCHER, Thomas Baber, Jr. 113 West Willow St., Chippewa Falls, Wis.	Jun.	Nov. 14, 1927
CULLEY, Earl Clifton. 636 West 136th St., Apartment 41, New York, N. Y.	Assoc. M.	Nov. 15, 1926
CURRY, Byron Kenneth. Engr., Fegles Constr. Co., Ltd. (Res., Lewis-Clark Hotel), Lewiston, Idaho.	Jun. Assoc. M.	Aug. 4, 1924 Nov. 14, 1927
DARWIN, Achibald Gilbert. Instr., Civ. Eng., Univ. of Idaho (Res., 426 East 1st St.), Moscow, Idaho.	Jun.	Oct. 10, 1927
DAVIS, John Oberly. 525 Meixell St., Easton, Pa.	Assoc. M.	Oct. 10, 1927

MEMBERS—(*Continued*)

		Date of Membership.
DEVLIN, John Joseph. Engr., Portland Cement Assoc., 347 Madison Ave., Room 1906, New York, N. Y.	Assoc. M.	Aug. 29, 1927
DILL, Frederick Hayes. Civ. Eng. Dept., Rutgers Univ., New Brunswick (Res., 729 Walnut St., Roselle Park), N. J.	Jun.	Nov. 14, 1927
DOYLE, Michael Francis, Jr. 533 West Hortier St., Germantown, Philadelphia, Pa.	Jun.	Nov. 14, 1927
DRAGER, Walter Louis. Engr., J. G. White Eng. Corporation, S en C, Estacion Pabellon, Aguascalientes, Mexico.	Jun. Assoc. M. M.	May 3, 1910 May 7, 1913 Oct. 10, 1927
DUNHAM, Clarence Whiting. Asst. Engr., Bridge Div., Port of New York Authority, New York, N. Y. (Res., 74 Carleton St., East Orange, N. J.)	Assoc. M.	Oct. 10, 1927
EAGER, William Lyle. Box 551, Hayward, Calif.	Jun.	Oct. 10, 1927
EDWARDS, Athole Brand. Asst. Engr., Div. of Met. Planning, Commonwealth of Massachusetts (Res., 4 West Cedar St.), Boston, Mass.	M.	Nov. 14, 1927
EMMONS, Walter Johnson. Room 1224 East Eng. Bldg., Univ. of Michigan, Ann Arbor, Mich.	M.	Nov. 14, 1927
ERWIN, Frank Jackson. 2415 E St., N. W., Apartment 202, Washington, D. C.	Jun.	Oct. 10, 1927
FOCHT, Ralph Garfield. Architectural Engr. (Res., 2633 Adams Mill Rd., Apartment 2), Washington, D. C.	M.	Nov. 14, 1927
FORDYCE, John Rison. Cons. Engr., Box 346, Hot Springs, Ark.	M.	Nov. 14, 1927
FORTUNO-SELLES, Francisco. Constr. Engr., Bureau of Public Works, Dept. of Interior, Concordia 12, Santurce, Porto Rico.	Assoc. M.	Nov. 14, 1927
FOWLER, Henry Charles, Jr. 678 Fulton St., Farmingdale, L. I., N. Y.	Jun.	Oct. 10, 1927
FRASER, Donald John. Field Draftsman, Great Western Power Co. of California; 1010 Bush St., San Francisco, Calif.	Jun.	Nov. 14, 1927
FREIRE, Manuel Alonso. 158 St. Paul St., Brookline, Mass.	Jun.	Nov. 14, 1927
GARNETT, Ernest Edwin, Jr. 3052 Thorn St., San Diego, Calif.	Jun.	Nov. 14, 1927
GESSNER, Charles Booth. 344 Batavia St., Toledo, Ohio.	Jun.	Oct. 10, 1927
GILBERT, Francis Prince. Senior Asst. Engr., North Jersey Dist. Water Supply Comm., Newark (Res., 407 Lake Ave., Lyndhurst), N. J.	M.	Nov. 14, 1927
GLYNN, Theodore William. 3511 Broadview Rd., Cleveland, Ohio.	Jun.	Nov. 14, 1927
GODWIN, Walter Hampton. Barnesville, Ga.	Jun.	July 11, 1927
GONNERMAN, Harrison Frederick. Mgr., Research Laboratory, Portland Cement Assoc., 33 West Grand Ave., Chicago, Ill.	M.	Oct. 10, 1927
GOSSETT, Franklin Rice. Deck Officer, U. S. Coast and Geodetic Survey, Washington, D. C.	Jun.	Nov. 14, 1927
GRANOFF, David. Junior Asst. Civ. Engr., Grade 1, State Dept. of Public Works (Res., 14 Meeker Ave.), Utica, N. Y.	Jun.	Nov. 14, 1927
GREEN, Robert Reeder. 1996 Pennington Rd., Trenton, N. J.	Jun.	Nov. 14, 1927
GUYER, George Allen. 33 East Shirley St., Mount Union, Pa.	Jun.	Nov. 14, 1927
HACKMASTER, Glen Hobart. City Engr., City Hall, Independence, Kans.	Assoc. M.	Nov. 14, 1927
HAGERTY, John James. Pres., Rodgers & Hagerty, Inc., 70 East 45th St., Room 5030, New York, N. Y.	Affiliate	Nov. 14, 1927
HALL, George Albro. Engr., George B. Gascoigne, 1149 Leader Bldg., Cleveland, Ohio.	Jun.	Oct. 10, 1927
HALL, George Laird. Div. Engr., Bureau of San. Eng., State Dept. of Health (Res., 8 East Read St.), Baltimore, Md.	M.	Nov. 14, 1927
HALLORAN, Paul James. Lieut., C. E. C., U. S. N., Care, Engr. in Chf., Port-au-Prince, Haiti.	Assoc. M.	Oct. 10, 1927
HANSEN, John Halvor. 1 Cherry St., Room 2615, Toledo, Ohio.	Jun.	Nov. 14, 1927
HANSON, Clarence William. Chf. Asst. to Res. Engr., Modjeski & Moran (Res., 19 College View Ave.), Poughkeepsie, N. Y.	Assoc. M.	Nov. 14, 1927
HANSON, Robert Andrew. Structural Engr. and Secy., Mortenson Constr. Co., 19th and Indiana Sts., San Francisco (Res., 916 Ensenada Ave., Berkeley), Calif.	Assoc. M.	Nov. 14, 1927
HART, Orville Haven. 116 South 9th St., San Jose, Calif.	Jun.	Nov. 14, 1927
HAUG, Ragnar. Draftsman, Koppers Co., Pittsburgh (Res., 439 Biddle Ave., Wilkinsburg), Pa.	Jun.	Nov. 14, 1927
HELD, Jack Schloss. 299 Clinton Ave., Newark, N. J.	Jun.	Nov. 14, 1927
HENDERSON, William Johnston. Instr., Structural Eng., School of Civ. Eng., Purdue Univ., 18 North 19th St., Lafayette, Ind.	Assoc. M.	Aug. 29, 1927
HICKS, Stuart Fenn. Asst. Village Engr. (Res., 287 Blunk St.), Plymouth, Mich.	Jun.	Nov. 14, 1927
HILBURGER, Elmer August. 173 Roehrer Ave., Buffalo, N. Y.	Jun.	Nov. 14, 1927
HILL, Henry Francis, Jr. Asst. Engr., U. S. Geological Survey, 2500 Custom House Bldg., Boston, Mass.	Assoc. M.	Nov. 14, 1927
HILL, Hugh Palmer, Jr. Insp. of Constr., J. C. Penney Co., 330 West 34th St. (Res., 710 Riverside Drive), New York, N. Y.	Assoc. M.	Nov. 14, 1927
HILL, Louis Hawes. Office Engr., City of Charleston (Res., Holley Ave., South Hills), Charleston, W. Va.	Jun.	Aug. 29, 1927
HINCKLEY, Herbert Woodbridge. Draftsman, Hoad, Decker, Shoecraft & Drury (Res., 610 Forest Ave.), Ann Arbor, Mich.	Jun.	July 11, 1927

MEMBERS—(*Continued*)

		Date of Membership.
HOGE, Edward Augustus Clyde. Gen. Mgr., Lathrop-Hoge Gypsum Constr. Co., 801 Neave Bldg., Cincinnati, Ohio	Assoc. M. M.	Nov. 3, 1915 Oct. 10, 1927
HOOVEL, William Henry. Engr., City of Waterbury (Res., 147 Columbia Boulevard), Waterbury, Conn	Jun.	Oct. 10, 1927
HOOVER, Clarence Boal. Supt., Divs. of Water and Sewage Disposal (Res., 252 Seventeenth Ave.), Columbus, Ohio	M.	Nov. 14, 1927
HUBSCHMITT, Elmer Philip. Technical Adviser, Devoe & Raynolds Co., Inc., 1 West 47th St., New York, N. Y. (Res., 434 Knickerbocker Ave., Paterson, N. J.)	Jun. Assoc. M.	Oct. 15, 1923 Nov. 14, 1927
HUSSEY, Edgar William. Box 392, Azusa, Calif	Jun.	Oct. 10, 1927
IVANCICH, Paul Nicholas. Drexel Court Apartments, Drexel Hill, Pa.	Jun.	Oct. 10, 1927
JACOBSEN, Robert Thorleif. Asst. Editor, *Engineering News-Record*, 10th Ave. at 36th St., New York, N. Y.	Assoc. M	Nov. 14, 1927
JEUNE, James Frederick Dudley. Care, G. Somerset, 57 St. James Ave., Papanui, Christchurch, New Zealand	Jun.	Aug. 29, 1927
JOHNSON, Algot Karl. Supt. of Constr., The William F. Kenny Co., 44 East 23d St., New York, N. Y. (Res., 715 Marshall Pl., Plainfield, N. J.)	Assoc. M.	Nov. 14, 1927
JONES, Herbert Edward. Box 2129, Stanford University, Calif.	Jun.	Oct. 10, 1927
JORY, John Godfrey. Asst. Supt., Cogswell-Koether Co., 406 Park Ave. (2628 North Charles St.), Baltimore, Md	Jun.	Oct. 10, 1927
KANE, Clyde Vernon. 2325 McGee Ave., Berkeley, Calif	Jun.	Oct. 10, 1927
KARL, Frederick John. Care, Raymond Concrete Pile Co., Box 310, Slidell, La	Jun.	Nov. 14, 1927
KECKLER, Clarence Merle. San. Engr., Monmouth Consolidated Water Co. (Res., 15 Clinton Pl., Red Bank), N. J	Jun.	Nov. 14, 1927
KEEFER, Chauncey Tennent. Engr., Cement Gun Constr. Co. of California, 58 Sutter St., San Francisco, Calif	Assoc. M.	Nov. 14, 1927
KENNEDY, Klein Webb. Transitman, Eng. Dept., Colorado Fuel & Iron Co., Pueblo, Colo	Jun.	Nov. 14, 1927
KOONTZ, Melvin Arthur. 191 Ramona Ave., El Cerrito, Calif	Jun.	Oct. 10, 1927
KRUEGER, Herman John. Asst., Bridge and Bldg. Dept., U. S. Steel Products Co., 30 Church St., New York, N. Y. (Res., 191 Sherman Ave., Jersey City, N. J.)	Jun. Assoc. M.	May 28, 1923 Nov. 14, 1927
KRYNINE, Dmitry Pavlovitch. Prof., Highway Eng., Moscow Superior Technical School and Moscow Inst. of Transportation Eng., M. Tcherkassky per 3/4 k., k. 35, Moscow, Union of the Socialistic Soviet Republics	M.	Aug. 29, 1927
KUHNS, John Daniel. 526 Forest Ave., Dayton, Ohio	Jun.	Nov. 14, 1927
KURCIAS, Maxwell. Chf. Estimator and Engr., Edwin J. Foley Const. Co., Inc. (Res., 1665 Nelson Ave.), New York, N. Y.	Assoc. M.	Nov. 14, 1927
LANG, Thomas Simeon. City Engr., City Bldg., Clarksburg, W. Va.	M.	Nov. 14, 1927
LANG, Victor Alexander. 97 East Ave., Wellsboro, Pa	Jun.	Nov. 14, 1927
LANGTHORN, Jacob Stinman, Jr. 52 William St., New York, N. Y.	Assoc. M.	Nov. 14, 1927
LARSEN, Ira Henry. (H. H. Larsen Co.), 68 Post St., San Francisco, Calif.	Assoc. M.	Nov. 14, 1927
LASKOWSKI, John. Minot, N. Dak	Jun.	Nov. 14, 1927
LAVINE, Ellis Lewis. Supt. of Constr., M. Masem & Son, Brooklyn (Res., 210 West 101st St., New York), N. Y.	Jun. Assoc. M.	Feb. 25, 1924 Nov. 14, 1927
LAWRENCE, Frank Elmaker. Cons. and Constr. Engr., City Engr., Okeechobee, Fla.	Assoc. M. M.	Nov. 27, 1917 Oct. 10, 1927
LECLAIRE, Joseph Paul. Chf. Engr., Harbour Commrs. of Montreal, 235 Wolseley St., Montreal, West, Canada	M.	Oct. 10, 1927
LUCCHETTI, Raul Jose Felix. Designing Engr., Dept. of Interior, San Juan, Porto Rico	Assoc. M.	July 11, 1927
LUNDEN, Eugene Bernard. Transitman, State Highway Dept., 315 Pearl St., Hartford, Conn	Jun.	Nov. 14, 1927
LUNDEN, Selim Oscar. Transitman, State Highway Dept., 315 Pearl St., Hartford, Conn	Jun.	Nov. 14, 1927
MACKENZIE, Morrell, Supt., McKenzie Constr. Co. (Res., 606 West Elmira St.), San Antonio, Tex	Assoc. M.	Oct. 10, 1927
McLEAN, Vincent. Western Elec. Co., Designing Engr., 80 John St., New York (Res., 10541 One Hundred and Eighty-Ninth St., Hollis), N. Y.	Jun. Assoc. M.	June 16, 1924 Oct. 10, 1927
MANN, Herbert Eicholz. Rodman, P. R. R. (Res., 2022 North 18th St.), Philadelphia, Pa	Jun.	Nov. 14, 1927
MARION, Armand Francois. Chf. Engr., The Pacific Coast Co., 612 L. C. Smith Bldg., Seattle, Wash	M.	Oct. 10, 1927
MARSH, Burton Wallace. Traffic Engr., City of Pittsburgh, 908 City-County Bldg., Pittsburgh, Pa	Assoc. M.	Oct. 10, 1927
MAURICE, Henry Addington, Jr. Draftsman, Bridge Dept., State Highway Dept., 1102 Perry St., Richmond, Va	Jun.	June 6, 1927
MAYER, Charles. Cons. Engr., 31 Union Sq., West, New York, N. Y.	M.	Nov. 14, 1927

MEMBERS—(*Continued*)

		Date of Membership.
MAYNARD, George Eben. Dist. Engr., Nashville Bridge Co. (Res., 5408 Suwanee Ave.), Tampa, Fla.	M.	Nov. 14, 1927
MEANS, Walker Wilson. 1302 West Peachtree St., Atlanta, Ga.	Assoc. M.	Nov. 14, 1927
MERRITT, Malcolm Innis. Secy-Treas., Daly & Merritt, Inc. (Res., 8 Rockland Ave.), Port Chester, N. Y.	Assoc. M.	Nov. 14, 1927
MEURSINGE, Johannes Hendrik, 3014 Clay St., San Francisco, Calif.	Jun. Assoc. M.	Nov. 26, 1923 Nov. 14, 1927
MEYER, Helge Fugl. Eng. Asst., Whangpoo Conservancy Board, 6 Kiukiang Rd., Shanghai, China.	Assoc. M.	Aug. 29, 1927
MILLER, Lloyd William. Care, Great Western Iron Works, 9th and Osage Sts., Kansas City, Kans.	Jun.	Oct. 10, 1927
MILLIKEN, Harold Edward. 50 Irving St., Cambridge, Mass.	Jun.	Nov. 14, 1927
MOONEY, Tom Gleason. 285 Madison Ave., Room 1505, New York, N. Y.	Assoc. M.	Nov. 14, 1927
MOORE, Robert Jerome, Jr. 422 Augusta St., San Antonio, Tex.	Jun.	Nov. 14, 1927
MORRIS, George Edward, Jr. Deck Officer, U. S. Coast and Geodetic Survey, Washington, D. C.	Jun.	Nov. 14, 1927
NAPIER, Leroy Munroe, Jr. 202 South West 10th Ave., Miami, Fla.	Jun.	Oct. 10, 1927
NEBIKER, Fred John. Office Engr., Barron G. Collier Interests, Everglades, Fla.	Assoc. M.	Aug. 29, 1927
NEUDATCHIN, Ivan Manuelovich. Designer, California Corrugated Culvert Co. (Res., 1691 Ward St.), Berkeley, Calif.	Assoc. M.	Oct. 10, 1927
NIELSEN, Roy Tryggve. Chf. of Survey Party, Larson & Fox, 175 Smith St. (Res., 270 Oak St.), Perth Amboy, N. J.	Jun.	Oct. 10, 1927
OBER, Milton L'Grande Edwards. Instrumentman, U. G. I. Contr. Co. (Res., 4946 Chestnut St.), Philadelphia, Pa.	Jun.	Nov. 14, 1927
OBERLIES, Francis Mathias. 3560 Lake Ave., Rochester, N. Y.	Jun.	Nov. 14, 1927
ODOM, James Julius. Box 28, Heflin, Ala.	Jun.	Oct. 10, 1927
OLIVER, Frank Gillespie. Insp., U. S. Engr. Dept., U. S. Engr. Office, Port Arthur, Tex.	Jun.	Oct. 10, 1927
O'REILLY, Anthony Rauen. Chf. Engr., Bureau of Water (Res., 1337 Good St.), Reading, Pa.	Jun. Assoc. M.	Dec. 6, 1920 Nov. 14, 1927
ORSELLI, Alfred Joseph. 1627 Filbert St., San Francisco, Calif.	Jun.	Oct. 10. 1927
PARCEL, John Ira. Prof. and Chf. of Div. of Structural Eng., Univ. of Minnesota (Res., 622 Sixth St., S. E.), Minneapolis, Minn.	M.	July 11, 1927
PASQUALINO, Philip Paul. Care, Warren Bros. Co., Central Palma, Oriente, Cuba.	Jun.	Oct. 10, 1927
PETERSON, Hilmer Frederic. 702 Hall of Records, Los Angeles, Calif.	Jun.	Nov. 14, 1927
PIDCOCK, George Edwin. Pres., Penn-Fla. Constr. Co.; Pres. and Executive Head, Incorporated Constr. Co.; Proprietor, G. Edwin Pidcock Co., 529 Hamilton St., Allentown, Pa.	Assoc. M.	Nov. 14, 1927
RAMSAY, George Chester. Local Mgr., Quantity Survey Bureau, 710 Santa Fe Bldg., Dallas, Tex.	Assoc. M.	Nov. 14, 1927
RANDOLPH, Edward Sydney. Office Engr., The Panama Canal, Box 72, Balboa Heights, Canal Zone.	Assoc. M. M.	Nov. 9, 1920 Oct. 10, 1927
RATCLIFFE, Robert Charles. 1410 Grant St., Apartment 32, Denver, Colo.	Jun.	Nov. 14, 1927
REESE, George Adam. (McClaskey & Reese), 818 Renkert Bldg., Canton, Ohio.	Assoc. M.	Nov. 14, 1927
RENN, Raymond William. Engr., The Proctor & Gamble Co., Cincinnati (Res., 4414 Kemper Ave., St. Bernard), Ohio.	Jun. Assoc. M.	Nov. 15, 1926 Nov. 14, 1927
RENSHAW, John Arthur. Engr., State Public Service Comm., Philadelphia (Res., 36 Saxer Ave., Springfield), Pa.	Assoc. M.	Aug. 29, 1927
RICE, Harold Gorton. Civ. Engr., Willett Blk., Rome, N. Y.	Assoc. M.	Nov. 14, 1927
RICE, Raymond Hall. 1129 Palmwood Ave., Toledo, Ohio.	Jun.	Nov. 14, 1927
RIGGS, Isaac Larkin. Asst. Engr., State Road Comm., Box 26, Morgantown, W. Va.	Assoc. M.	July 11, 1927
RIPS, Merle Norman. Senior Civ. Draftsman, Water Board, Eng. Div., Water Works Park, Detroit, Mich.	Jun.	Nov. 14, 1927
ROBERTS, Earl Ivan. San. Engr., H. P. Jones & Co., 1601 Second National Bank Bldg., Toledo, Ohio.	M.	Nov. 14, 1927
ROBERTS, Thomas Kesler. Engr., Zoning and Planning, City of Greensboro, City Hall, Greensboro, N. C.	Assoc. M.	Nov. 14, 1927
ROBERTS, William H. Asst. Engr., Dept. of Eng. (Res., 399 Woodbine Ave.), Rochester, N. Y.	Assoc. M.	Nov. 14, 1927
ROGERS, Harry Stanley. Prof. and Dean of Civ. Eng., Oregon State Agri. Coll. (Res., 210 North 11th St.), Corvallis, Ore.	M.	Nov. 14, 1927
ROLLMAN, Otto Charles. State Constr. Eng., Wisconsin Highway Comm., 1138 South Jackson St., Green Bay, Wis.	Assoc. M. M.	Nov. 21, 1921 Oct. 10, 1927
SADDAM, Tomas Abrina. Surveyman, Pittsburgh Flood Comm. (Res., Downtown Y. M. C. A., Wood and 3d Sts.), Pittsburgh, Pa.	Jun.	Nov. 14, 1927
SANTELMANN, Alfred William. Asst. Structural Engr., Superv. Archt. of Treasury, Structural Div. (Res., 2456 Twentieth St., N. W., Apartment 407), Washington, D. C.	Jun. Assoc. M.	May 28, 1923 Nov. 14, 1927

MEMBERS—(*Continued*)

	Date of Membership.
SCHAD, James Albert. Asst. Engr., The Gypsum Industries, 844 Rush St., Chicago, Ill.	Assoc. M. Nov. 14, 1927
SCHLOM, Louis Henry. Asst. Engr., City of Houston (Res., 1812 Bell Ave.), Houston, Tex.	Jun. Aug. 31, 1925 Assoc. M. Nov. 14, 1927
SCOTT, Mahlon Douds. Mgr., Consolidated Expanded Metal Co., 545 Kathmere Rd., Upper Darby, Pa.	Assoc. M. Nov. 14, 1927
SEDGWICK, George Arthur. Detailer and Estimator, Dyer Bros.-Golden West Iron Works; 4730 Melrose Ave., Oakland, Calif.	Jun. Oct. 10, 1927
SEEGER, Orville Henry. 137 West Water St., Urbana, Ohio.	Jun. July 11, 1927
SHADRAKE, Bolick John. 108-48 Liverpool St., Jamaica, N. Y.	Jun. Nov. 14, 1927
SHAPE, Robert Louis. Archt. (Hart & Shape), 247 Park Ave., New York, N. Y.	M. Nov. 14, 1927
SHAW, Saul. Structural Engr. (Saul Shaw & Co.), 24 Commerce St., Room 1224, Newark, N. J.	Assoc. M. Nov. 14, 1927
SICKEL, Horace Bolivar Allen. Chf. Engr. and Vice-Pres., Layne-Ohio Co., 8 East Broad St., Columbus, Ohio	Assoc. M. Nov. 14, 1927
SLOBODA, Edward. Care, Babcock, Morgan Ave., near Stop 10, Troy Rd., Schenectady, N. Y.	Jun. Oct. 10, 1927
SMITH, Clyde Fuller. Res. Engr., Los Angeles County Sanitation Dist. No. 1, 10119 Beach St., Los Angeles (Res., 150 Live Oak St., Huntington Park), Calif.	Assoc. M. June 6, 1927
SMITH, Edward Durant. 2901 Pacific Ave., San Francisco, Calif.	Jun. Oct. 10, 1927
SMITH, Frank Miller, Jr. Associate Prof., Civ. Eng., North Texas Agri. Coll., 311 East Front St., Arlington, Tex.	Jun. Nov. 14, 1927
SMITH, George Rudolph. Asst. to Village Engr. (Res., 4 Wheeler Ave.), Pleasantville, N. Y.	Jun. July 11, 1927
SMITH, Robert John. 1400 East 53d St., Chicago, Ill.	Jun. Oct. 10, 1927
SOFFE, Benjamin. Dist. Sales Mgr., The Permutit Co., 204 Owen Bldg. (Res., 9345 Stoepel St.), Detroit, Mich.	Assoc. M. Nov. 14, 1927
SOLER, Gabriel. 235 West 102d St., Apartment 4-O, New York, N. Y.	Jun. Oct. 10, 1927
STARK, Arthur Henry. 3916 Mapledale Ave., Cleveland, Ohio.	Jun. Nov. 14, 1927
STARK, Raymond John. Instr., Civ. Eng., Princeton Univ. (Res., 116 North Moore St.), Princeton, N. J.	Jun. Nov. 14, 1927
STRICKLAND, Richard Porter. Computer, Applebee & Slater, Ossining (Res., 17 Martling Ave., Pleasantville), N. Y.	Jun. Nov. 14, 1927
STROMSOE, Douglas Albert. Sales Engr., Pipe Dept., Baker Iron Works, 950 North Broadway, Los Angeles (Res., 1604 Fair Oaks Ave., South Pasadena), Calif.	Jun. Aug. 4, 1924 Assoc. M. Nov. 14, 1927
SUTTON, Arthur Charles. 1640 Fowler Ave., Portland, Ore.	Jun. Oct. 10, 1927
TABOR, Henry Whitney. Chf. of Party, Southern California Edison Co., Box 52, Big Creek, Calif.	Assoc. M. Nov. 14, 1927
TETER, George Staudt. Plant Asst., Newark Concrete Pipe Co., Newark, N. J. (Res., 1059 New York Ave., Brooklyn), N. Y.	Jun. Nov. 14, 1927
THEROUX, Frank Richard. San. Engr., Sewage Disposal Div., City of Miami, Miami, Fla.	Assoc. M. Dec. 4, 1922 M. Oct. 10, 1927
THUMLEY, Jim. With Graham, Anderson, Probst & White, 1417 Railway Exchange Bldg., Chicago (Res., 2766 Garrison St., Evanston), Ill.	M. Nov. 14, 1927
TIPPY, Kenneth Clem. 200 East 10th St., Ellensburg, Wash.	Jun. Oct. 10, 1927
TROST, Louis Fred. 21 North Birch St., Sapulpa, Okla.	Jun. Oct. 10, 1927
TURNER, Webster Franklin. Asst. Dist. Engr., State Highway Dept., Jonesboro, Ark.	Jun. Oct. 2, 1922 Assoc. M. Nov. 14, 1927
UHRIG, Leo Vernon. Instr., Surveying and Municipal Eng., The Rice Inst., Houston, Tex.	Jun. July 11, 1927
VALEGA, Raúl Felix. Matajudios 158, Lima, Peru.	Jun. Oct. 10, 1927
VALENTINE, Allard Mayo. Supt. of Constr., Rust Eng. Co., Pittsburgh, Pa. (Res., 58 Morton St., New York, N. Y.)	Jun. July 11, 1927
VAN KLEECK, LeRoy Winfield. 870 Beacon St., Boston, Mass.	Jun. Oct. 10, 1927
VERNON, Abner Joseph. 102 Garrison Ave., Jersey City, N. J.	Jun. Nov. 14, 1927
VETTER, Carl Peter Pedersen. Designing Engr. and Chf. Draftsman, Great Western Power Co., 530 Bush St., San Francisco, Calif.	Assoc. M. July 11, 1927
VIDAL, Emile Numa. Senior Eng. Draftsman, Bureau of Reclamation, 1441 Welton St. (Res., 900 Sherman St.), Denver, Colo.	Jun. Nov. 14, 1927
VINCENT, Everett Mohlar. Structural Squad Chf., D. P. Robinson & Co., Inc., 125 East 46th St., New York (Res., 40 Park Pl., Goshen), N. Y.	Assoc. M. Nov. 14, 1927
VINCENT, Russell. 503 Randolph Ave., Seattle, Wash.	Jun. Oct. 10, 1927
VINER, Eli Monie. Cons. Engr., 423 Industrial Trust Bldg., Providence, R. I.	Assoc. M. Nov. 14, 1927
VOSBURG, Willis Harvey. Div. Engr., C. M. & St. P. Ry.; 125 East Woodland Ave., Ottumwa, Iowa	M. Nov. 14, 1927
WAGNER, Aaron Harry. 632 Hermitage St., Roxborough Philadelphia, Pa.	Jun. Nov. 14, 1927
WALTERS, John Clifford. Trappe, Pa.	Jun. Nov. 14, 1927
WARING, Frederick Holman. Chf. Engr., State Dept. of Health, Columbus, Ohio.	Jun. May 7, 1913 Assoc. M. Sept. 9, 1919 M. Oct. 10, 1927

MEMBERS—(*Continued*)

		Date of Membership.
WATSON, Leslie Barton. Engr., Shire of Tintebar; Cons. Engr., Ballina Municipality, Alstonville, Northern Rivers, New South Wales, Australia	Assoc. M.	Aug. 29, 1927
WATSON-MacINNES, John. Constructor, Horne Copper Corporation, Noranda, Que., Canada	Jun.	Nov. 14, 1927
WHIPPEN, Leonard Swan. Structural Designer, McClellan & Junkersfeld, Inc., New York, N. Y. (Res., 12 Oakwood Ave., Glen Ridge, N. J.)	Assoc. M.	Oct. 10, 1927
WIGHT, Roland Henry. Box 246, Palo Alto, Calif	Jun.	Nov. 14, 1927
WILKINSON, William MacIlhenny. Pres., M. Ward Easby, Inc., 1505 Race St., Philadelphia, Pa	M.	Nov. 14, 1927
WILLSON, George Harry. Chf. Draftsman, McClintic-Marshall Co., 842 Pacific Elec. Bldg., Los Angeles, Calif	Assoc. M.	Nov. 14, 1927
WINKLER, Edward Rudolph, Jr. Asst. Engr., Water Companies 922 Commercial Trust Bldg., Philadelphia (Res., 97 Glen St. Chambersburg), Pa	Jun. Assoc. M.	Feb. 25, 1924 Nov. 14, 1927
WISTRICH, Harry Arnold. Bridge Designer, L. V. R. R. (Res., 1126 Main St.), Bethlehem, Pa	Assoc. M.	July 11, 1927
WOOD, William Douglas. U. S. Bureau of Reclamation, Augusta, Mont	Jun.	Oct. 10, 1927
WRAY, Theodore Strong. Junior Structural Engr., Bldg. Dept., Board of Education, 13 South Fitzhugh St. (Res., 109 West Ave.), Rochester, N. Y.	Assoc. M.	Nov. 14, 1927
WRIGHT, Chilton Austin. 30 Norwood Ave., Stapleton, N. Y.	Jun. Assoc. M.	April 3, 1922 Nov. 14, 1927
WRIGHT, Clem Wharton. Div. Engr., State Highway Dept., Box 239, Griffin, Ga	M.	Nov. 14, 1927
WYLLIE, George Fair. 615 Monroe St., Ann Arbor, Mich	Jun.	Nov. 14, 1927
YEATTS, Ernest Bailey. Draftsman, State Highway Dept., (Res., 2765 Hickory St.), Abilene, Tex	Jun.	Nov. 14, 1927
YOUNG, Donovan Harold. 1211 Maple Ave., Pullman, Wash	Jun.	Oct. 10, 1927

Deaths

BARNES, Thomas Howard. Elected Member, October 4, 1899; died November 15, 1927.
COLNON, Redmond Stephen. Elected Associate Member, July 9, 1906; Member, July 12, 1926; died October 8, 1927.
CRANE, Clarence Austin. Elected Associate Member, March 5, 1902; Member, May 4, 1909; died December 5, 1927.
CUMMINGS, Elmore David. Elected Associate Member, November 4, 1903; Member, June 30, 1911; died November 17, 1927.
FIELDS, Samuel James. Elected Member, March 5, 1884; died November 19, 1927.
GUDE, Albert Valdemar. Elected Associate Member, June 5, 1907; Member, December 31, 1913; died September 17, 1927.
HARDING, James Clark. Elected Member, January 2, 1912; died November 16, 1927.
HOYT, William Hausmer. Elected Member, June 30, 1911; died November 10, 1927.
KENNEDY, James Henry. Elected Member, May 2, 1900; died October 21, 1927.
McKINNEY, Francis William. Elected Junior, March 31, 1908; Associate Member, January 7, 1913; died November 25, 1927.
NAUMAN, George. Elected Member, May 4, 1904; died September 28, 1927.
O'REILLY, John Devereux. Elected Member, August 31, 1925; died November, 1927.
ROSE, John Gansovertte. Elected Associate Member, April 14, 1919; died October 27, 1927.
SLEIGHT, Reuben Benjamin. Elected Junior, December 6, 1915; Associate Member, April 25, 1921; died November 14, 1927.

Total Membership of the Society, December 6, 1927

Members	**5 397**	
Associate Members	**5 675**	
Corporate Members		**11 072**
Honorary Members		**15**
Juniors		**1 495**
Affiliates		**142**
Fellows		**8**
Total		**12 732**